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Methods for National Medical Registration

The present medical registration laws in the United States are far from perfect. Under the method of examination now in vogue the man with a good theoretical knowledge of medicine can be admitted to practice in any State, but the practitioner who has been graduated several years often meets with great difficulties. His recollection of anatomy, physiology, chemistry and pathology deals not with the theory but the practice of the subjects and on this account he often fails to "pass the board." In short, our present method of examining candidates is discriminatory and therefore unfair, for it militates for the recent graduate and against the older practitioner.

This is not as it should be, or even as our State boards desire, but in the evolution medicine is now undergoing the real answer to this vexed problem has not heretofore been given.

Many solutions have been offered. One which seemed to fulfill every requirement was the enactment of a national medical registration law, which would permit a man, one licensed by the national medical registration board to practice in any part of the United States or its possessions. This idea was based on the plan of the Conjoint Board of the Royal Colleges of Physicians and Surgeons of Great Britain, which licenses practitioners to pursue their profession in any part of the United Kingdom. Indeed, in practically every country aside from our own, there is a national board and the physicians who qualify before that body are privileged to engage in medical work in any part of the country's dominions. Theoretically, such a board could be established in the United States, which would answer every purpose and would in reality give national reciprocity between states. Actually, however, such a board is an impossibility, on account of our constitutional belief in states rights. As several of the contributors to this month's symposium point out, an amendment to the Federal constitution would be necessary to permit the establishment of such a board and Mr. Vandiver very clearly and succinctly shows the legal barriers in the way.

In expressing regret that national registration does not offer a means of solution, the feeling is tempered somewhat by the recent attempt of a United States Senator to have a certain foreign advertising specialist admitted to practice in the District of Columbia without examination on the sayso of the aforesaid advertising specialist that he can cure tuberculosis. To the credit of the Senate the proposed bill died a-borning, due, we suspect, to the activities of the two physicians in that august body, Senator Gallinger of New Hampshire and Senator Lane of Oregon, who are protecting the public health by safeguarding the people against irregular measures and persons.

The action of the Senator in question might portend other and even more dangerous action on the part of some of the untried men in the upper house. In view of the continuous ill-fate of the Owen bill, it may be well that the idea of the national registration law cannot be carried out, for some senatorial lawmaker might wish to class Christian Scientists as medical practitioners.

National reciprocity must, therefore, be the solution. The requirements for preliminary or professional education and for hospital work must be identical in the various commonwealths, thereby permitting the registration board of one state to recognize the license of another.

How can this condition be effected? Through the recently organized Federation of State Medical Boards of the United States, which is the outgrowth of two previous organizations, the American Confederation of State Medical Boards and the National Confederation of State Medical and Licensing Boards.

On March 2, 1911, a formal conference was held in the Congress Hotel, Chicago, relative to the amalgamation of the American and National Confederations. The conference was called by William P. Harlow, M.D., President of the Association of American Medical Colleges. Those present were Dr. W. A. Spurgeon, President of the American Confederation, Dr. George H. Matson, Secretary of the National Confederation, Dr.

B. D. Harrison, Secretary of the American Confederation, Dr. A. D. Bevan, President and Dr. N. P. Colwell, Secretary of the Council on Medical Education of the American Medical Association, Dr. Fred C. Zapffe, Secretary of the Association of American Medical Colleges, and Abraham Flexner, representing the Carnegie Foundation for the Advancement of Teaching. It was the sense of this conference that it is desirable that there be in this country one strong organization of state examining and licensing boards.

Organization was effected and work commenced.

At the last conference there were fifteen addresses on such subjects as "Should Medical Boards Require One More Year of Medical Work," "Should an Interneship Be Required," "Rules and Regulations Governing Examinations," "Methods of State Board Record Keeping," "Means of Keeping Politics Out of State Board Affairs," "What Shall Be Charged For Examination?" etc.

The officers are: President, Dr. Charles H. Cook of the Massachusetts Board, Natick; vice-president, Dr. Albert de Bey, president of the Iowa Board, Orange City; secretary and treasurer, Dr. Otto V. Huffman, secretary of the New York Board, Albany; executive committee: Dr. James A. Duncan, president of the Ohio Board, Toledo; Dr. John M. Baldy, president of the Pennsylvania Bureau, Philadelphia, and Dr. Herbert Harlan, president of the Maryland Board, Baltimore.

The present federation aims to bring about a frank discussion on all matters pertaining to medical education and preliminary requirements, the kind of examination to be held and everything of value to the subject at hand. It is not the purpose of the Federation to take any action or to interfere with matters until there has been a thorough thrashing out of the question of a standard medical education and examination so far as necessary to protect the public. It will be largely through this organization that universal reciprocity will be brought about, since the State boards themselves are official bodies and in close contact with legislative bodies. The spirit of the organization is excellent and the good that is accomplished can hardly be estimated. A great work is being accomplished.

In this, as in all other things, the organization must creep before it can walk. The Federation will therefore first concern itself with minor matters, gradually leading up to the greater things. Universal reciprocity is its ultimate aim.

With the metamorphosis there will undoubtedly come some change for the better in the method of examinations.

Mr. Henry S. Pritchet, president of the Carnegie Foundation for the Advancement of Teaching, says in his last annual report, in the chapter on medical education:

"It has long been plain that the time was ripe for an improvement in the methods of conducting our state examinations. In the past these examinations, wholly in writing, not only made it possible for poor schools to appear successful, but actually compelled good schools to adopt to some extent vicious teaching methods. The English examinations, largely practical in character, have the oposite tendency; and the clear exposition of Mr. Hallet, secretary of the Conjoint Board of Great Britain, to the Council of Medical Education, proved that such tests are both feasible and necessary in our own states."

It is imperative that the form of our medical registration examinations be made more practical and less theoretical. What boots it that a candidate knows the location and purposes of Luscha's gland? How much more important is it that he know how to operate successfully on a strangulated hernia. Yet the recent graduate might write enlighteningly upon the gland and be quite unable to relieve the strangulation.

Our examinations should be oral, as well as written and they should be held in the hospital wards and in the morgue, as well as in the examination room.

If we can accomplish this result the medical men who are licensed will be eminently competent to handle the various medical and surgical conditions that come to their attention. If national reciprocity becomes a fact the qualified physician of years' standing, who desires, for some reason or other, to change his location will not be barred out of another State by his inability to recall his student day preliminary medical branches.

When all these conditions are met medicine will set itself upon a much higher and fairer plane.

THE CONSTITUTION AN IMPEDIMENT.

ALMUTH C. VANDIVER, B. Sc., LL.B.,
COUNSEL TO THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.
New York.

Without an amendment to the Constitution of the United States enlarging the powers of Congress to that extent, no medical registration act providing for the qualifications of medical practitioners and registration, of their license to practice medicine with the proper officials, is possible in this country.

This is true for the reason that in the enumeration of the powers of Congress contained in Section 8, Article 1 of the Constitution, which is the fundamental law of this country, there is no reference to the exercise of any police power in State matters.

In Article 10, which was one of the early amendments of the Constitution, it is provided that: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively or to the people."

The determination of the qualifications of medical practitioners has been held by the Supreme Court of the United States to be an exercise of the police power of the individual and sovereign states of the Union.

The leading case on this subject is Dent v. West Virginia, 129 U. S., 114.

Upholding the right of the State to provide qualifications for medical practitioners, and regulations of practice, the unanimous Court, through Mr. Justice Field, said:

"The power of the State to provide for the general welfare of its people authorizes it to prescribe all such regulations as, in its judgment, will secure or tend to secure them against the consequences of ignorance and incapacity as well as of deception and fraud. As one means to this end it has been the practice of different States, from time immemorial, to exact in many pursuits a certain degree of skill and learning upon which the community may confidently rely, their possession being generally ascertained upon an examination of parties by competent persons, or inferred from a certificate to them in the form of a diploma or license from an institution established for instruction on the subjects, scientific and otherwise, with which such pursuits have to deal. The nature and extent of the qualifications required must depend primarily upon the judgment of the State as to their necessity. If they are appropriate to the calling or profession, and attainable by reasonable study or application, no objection to their validity can be raised because of their stringency or difficulty."

A NATIONAL REGISTRATION LAW FOR PRACTITIONERS OF MEDICINE.

OTTO V. HUFFMAN, M. D.,

SECRETARY OF THE NEW YORK STATE BOARD OF MEDICAL EXAMINERS; SECRETARY-TREASURER OF THE FEDERATION OF STATE MEDICAL BOARDS OF THE UNITED STATES.

Albany, N. Y.

There seems to be a general feeling throughout the medical profession that there should be a national law governing the licensing of medical practitioners. In some instances this feeling has had its origin in impatience with the existing strict regulations of some states which, because the examinations are not practical, very often prove prohibitive to the obtaining of a license by a capable physician desiring to move into those states. In other instances, this desire for a national law has arisen in the dissatisfaction with the state's incapacity to make proper regulations on account of certain proprietary interests with strong political influence. Mostly, however, this feeling is but part of the general movement for centralized government.

Just how such a federal law governing the practice of medicine could be brought about, if ever, is a difficult question. It is almost certain that a law will not be passed by Congress until a majority of the states have of their own accord agreed upon a uniform standard because, in order to make the law effective, it is necessary to define medical education, a medical college, or the subjects for examination. Even though the majority of the states might agree upon a standard, there would be those states, like California and Florida, in which the profession itself would, for self protection, have to oppose throwing the state wide open to the great numbers of physicians who might come there to practice only during "the season." Certainly there should be no valid objection by the individual states to the adoption of a uniform standard since humanity is the same everywhere. There would be no opposition on the part of the profession, for in its entirety it stands for advancement in all that pertains to sound practical training in education or sound practical methods in examination. It is the public which must be taught the meaning of the word medicine as defined in Webster's Dictionary. In making laws or in listening to the advocates of cults it persists in confusing *the practice of medicine* with *medicinal treatment!* In thinking of medical schools it continues to hold the belief, which the proprietary schools succeeded in fastening upon its mind, that medicine can be learned from books and lectures alone. Only when the subject of medical education is presented to the laity by analogy does it see it in its true light. Some time ago a manufacturer of explosives stated that he thought the state should be satisfied with a written examination of candidates for medical licenses without concerning itself with anything else. He immediately saw the fallacy in his statement when he was asked whether he would be willing to employ a ballistic expert simply on his passing a written examination. The whole question of bringing about a national law or a uniform standard permitting of interstate reciprocity as to indorsement practically national in scope is, after all, one of educating the public.

At present the entire subject of medical education, medical examinations and medical practice acts in this country is in a muddle. Our state boards for the most part have put a premium on bookish acquirements by neglecting the question of practical training. The good that these boards have accomplished in raising the standard of instruction in the medical colleges has been offset by the harmful effect in making it no longer to the interest of the student to seek practical training either in the school or outside. There is the necessity of a grand coming together of educators, the profession and laymen to determine just what knowledge, training and experience should be demanded of medical practitioners in so far as necessary to protect the public.

It is strange that in most attempts of the state to regulate the practice of medicine the common law has been entirely neglected. In the common law of our land a physician or surgeon is liable for malpractice if he does not exercise a reasonable degree of knowledge and skill, and in some cases it has even been held that he must in addition be possessed of a reasonable degree of experience. How absurd it is, then, for the state to meddle with medical education and medical licensure if it does not see to it that the students are really skilled in practical methods so that they will not be liable for malpractice. Under present conditions, the state offers no protection to its licentiates against suits for malpractice nor against competition with all manner of sects and cults. It would be a very simple matter to take an invoice of all our practical medical knowledge and practical methods and make a suitable law. The very essence of such a law would be the standard it took—whether that of "a reputable medical college" or a proper examination. A reputable medical college must be thoroughly defined else the diploma mills will again start up. The examination must be broad, thorough and practical, and not designed for recent graduates alone.

There should be no confusion of aims as in the past. The state should rightly aim to control only practical things; it should not undertake to introduce higher education or broad culture more generally into the profession. These can never be forced by the state; they will come only through inspirational teaching and guidance. So long as the public remains ignorant of the truths of medical science there will always be a demand for pseudo-practitioners, whether they be called physicians, doctors or what not. In making a law this should be kept in mind, for, if requirements embracing an ideal education were imposed upon all candidates for license, a new branch or order might be started which, having public opinion with it, could obtain a separate law just as the sects have in some of our states.

If a medical college is to be defined by the law a syllabus of what must be taught would have to be prepared, and the amount of equipment necessary would have to be outlined as well as the number of charity-bed and dispensary patients available per student for the purpose of instruction. As it is now, many schools are kept alive by the proprietary interest only, and these schools utterly fail to inspire their students with the high ideals and nobleness of their profession or to train them in practical methods.

If the law shall define the character of the examination, it should by all means be a practical examination, for this is the only way of testing one's skill. But there are two other reasons why it should be a practical examination. The first is the reflex effect of causing the medical schools to give proper practical training and the student to seek experience outside of the medical school curriculum. The other is the very desirable effect of practical training in medicine on moral development. There is no other way by which the moral tone of the profession could be raised more surely and more quickly. The student would take a true delight in preparing for a thorough practical ex-

amination given in a leisurely manner; not simply looking into a microscope and stating what is seen, looking over one or two old chronic cases, or designating the use of a few instruments! The wholesome effect of proper thoroughly practical examinations on both the teacher and pupil can hardly be estimated. Under such a plan it would be a pleasure to teach and train students. It would then become a pleasure to study medicine and to prepare for the test.

NATIONAL RECIPROCITY A NECESSITY.

M. A. Barndt, M. D.
PRESIDENT OF THE WISCONSIN BOARD OF MEDICAL EXAMINERS.
Milwaukee, Wis.

I thoroughly believe we should have uniform state laws upon the subject of medical registration. I have always contended that a man qualified to practice his profession in one state should be considered equally qualified to do so in any other, and entitled to a license upon the presentation of proper credentials from the examining board of that state in which he was last in practice. We are gradually coming to this, but it seems to me that the justice of this is so obvious that greater effort should be made in this direction. No one is so well qualified to help this cause along as the medical press.

As to the matter of credentials, this feature can be used as a power for good. If an applicant for a license in a new state finds himself compelled to present a certificate from a local or state medical association testifying to his ethical and social standing in his community, it will be an important factor in holding in check many a man who might be inclined to be careless upon these points and who under the methods now in vogue is able to go from state to state unhampered.

It is my conviction that the present lack of uniformity in our medical registration laws is unjust to many in the profession, men of honor, standing and experience, eminently fitted to practice the healing art, yet who for some reason or other are disinclined to subject themselves to the rigid technical examination of to-day. To prevent such men from earning their livelihood where it seems most advantageous or congenial imposes an unnecessary hardship. As far as I am aware ours is the only profession or business in which such a situation prevails.

As to a national law upon the subject of medical registration, while I do not pretend to speak authoritatively, it strikes me that this could not be done without a usurpation of the rights of the state as guaranteed by the constitution.

STANDARDIZE MEDICINE, THEN LEGISLATE.

J. Francis Calef, A. M., M. D.
PRESIDENT OF THE CONNECTICUT STATE BOARD OF MEDICAL EXAMINERS.
Middletown, Conn.

In my judgment the only way to safeguard both physicians and the public is: 1st, consolidate all legitimate medical interests under the standard of the American Medical Association; 2d, have each state by statute enact that the examining committee of the state association shall have full power to grant and (for cause) withdraw licenses to practice medicine within that state. Placing the control of medical matters in the hands of politicians is most dangerous (*vide* present conditions in England). Reciprocity and uniformity are much to be desired, but the medical profession, to gain them must not sell itself into slavery.

PERFECT MEDICAL STANDARD WITHIN A FEW YEARS.

John M. Baldy, M. D.,
PRESIDENT OF THE BUREAU OF MEDICAL EDUCATION AND LICENSURE OF THE COMMONWEALTH OF PENNSYLVANIA.
Philadelphia, Pa.

I do not think a national medical registration law is advisable at this time, for the reason that such a law would in the present chaotic condition of state laws be a compromise of such a character as to hamper those states with or about to obtain proper laws. And any improvement of the national law would be necessarily as slow as the weakest link in the chain. The past five years have done so much for the advance of higher standards, and the next five will probably perfect them. Until the ultimate standard is reached it would be foolish to impede in any way the forces which are moving so rapidly to a sure end.

In the meanwhile, methods of reciprocity are improving and are susceptible of still greater improvement. The onward movement in this direction is also moving rapidly and will gradually perfect itself as standards improve. The time is short now when all surviving schools will be held to the same standard—the rest will go out of existence. When this time comes it will be far easier for state boards to establish wide and equitable reciprocity than to secure a national law which would be of the proper standard.

Pennsylvania has made a start in the right direction. She recognizes the school on whose standards she has passed. She will take in reciprocity the graduates from these schools, no matter from what state they apply, provided they have in addition passed a state board. When all schools have reached this standard Pennsylvania will have in a fair way established a mercurial reciprocity. She is not alone in this method or somewhat similar methods, and there is no practical reason why at this time every state board could not and should not establish the same system. Should they do so the desirability of a national law would disappear.

THE SOLUTION LIES IN THE NEW FEDERATION.

Herbert Harlan, M. D.,
PRESIDENT OF THE MARYLAND STATE BOARD OF MEDICAL EXAMINERS.
Baltimore, Md.

I may say, in passing, that while I think a national medical registration law is very desirable, in my opinion it is not at all feasible, chiefly for the reason that all of our state laws have been repeatedly determined to be constitutional only on account of their being of the nature of police regulation. Now police regulation belongs essentially to the individual states.

My idea is that the nearest we can come to a national registration is for the Federation of State Medical Boards of the United States to become a body of sufficient power to practically enforce membership on all, or nearly all, of the states. Having established reasonable standards for the work of all boards in membership and granting recognition of license to all boards of membership and refusing reciprocal relations to boards not at least maintaining equal standards with those of the Federation, practically a general reciprocity may be established.

I have great hopes that much may be accomplished when the new Federation of State Medical Boards becomes fully organized, and if all, or a large number, of the boards of the United States will join this federation, we can approach such reciprocity.

DIFFERENT EXAMINATIONS FOR OLDER PRACTITIONERS AND RECENT GRADUATES.

JOHN WILLIAM FYFE, M. D.
PRESIDENT OF THE CONNECTICUT ECLECTIC MEDICAL EXAMINING BOARD; ASSOCIATE EDITOR OF THE ECLECTIC REVIEW.
Saugatuck, Conn.

If by the words "A National Medical Registration Law" is meant a law to be enacted by the Congress of the United States, I am opposed to such a registration law, as I am opposed to all Congressional laws intended to in any way interfere with or regulate the practice of medicine within the states. I am, however, decidedly in favor of a uniform license and registration law. In my opinion, such law should be prepared by the concerted action of the medical examining boards of the several states, after thorough investigation and careful study of the needs of the *entire* medical profession. I believe much good might be accomplished by suitable uniform medical registration laws, or, in other words, uniform registration laws, to be enacted by the legislatures of the several states. Our present license laws are very unsatisfactory, and most of them are unjust, inasmuch as they require the practitioner of ten, fifteen or more years to pass the same examination as is demanded of the recent graduate. My fifteen years' experience as a medical examiner has convinced me that this is unnecessary, unreasonable and decidedly unjust. Applicants for registration should be divided into two classes, as follows:

1. *Physicians who have been in practice ten or more years.* This class should be required to pass a thorough examination in diagnosis, obstetrics, materia medica and all of the modern methods of preventing disease and protecting the public health. Such an examination would be just to the experienced practitioner and would afford ample protection to the community in which he located.

2. *Recent Graduates.* This class of applicants should be required to stand at least 75 per cent. in all the branches now taught in first-class medical colleges. It also should be made necessary for such graduates to spend at least one year after graduation in actual practice, either in a hospital or under the guidance of a practitioner of medicine, before being granted a license as a competent person to practice medicine.

FEDERAL CONSTITUTION A BAR.

GEORGE W. WEBSTER, M. D.,
PRESIDENT OF THE ILLINOIS STATE BOARD OF HEALTH.
Chicago, Ill.

In view of the fact that the license and control of the practice of medicine is an exercise of the police power and is purely a state function and one with which the federal government can have nothing to do without an amendment to the Federal Constitution and without an amendment to the different state constitutions, I can scarcely see how a national registration law could be legally enacted. At the present time there is reciprocity in medical licensure between nearly all states having uniform standards. As the standards in the different states become more nearly uniform, reciprocity will increase.

A NATIONAL LICENSING BOARD NEEDED.

HENRY R. STOUT, M. D.,
PRESIDENT OF THE FLORIDA BOARD OF HOMEOPATHIC MEDICAL EXAMINERS.
Jacksonville, Fla.

After an experience of 24 years as a member of our Board of Examiners, I feel that it is entirely wrong to require a physician to pass an examination to secure a license to practice his profession when he removes to another state. After a physician has been in active practice for a number of years, the best of us would hesitate before making the attempt to pass an examination that would be required of a student graduating. I favor a national licensing board.

ONLY HOPE IS RECIPROCITY BETWEEN STATES.

W. A. SPURGEON, M. D.
PRESIDENT OF THE STATE BOARD OF MEDICAL REGISTRATION AND EXAMINATION OF THE STATE OF INDIANA.
Muncie, Ind.

I appreciate quite fully the very general interest among members of the medical profession in registration laws, and I am aware that many medical men favor a national medical registration law.

Such a law, if it were possible under the provision of our federal constitution, would be an excellent thing in that it would obviate the necessity for interstate reciprocity in medical licensure.

Under the organic law of this government the regulation of the practice of medicine rests entirely with the state legislatures, except in the territories and insular possessions that are under the direct jurisdiction of the general government; hence a "national medical registration law" is not possible in this country, and the several state medical boards are compelled to attempt the relief of the situation by reciprocity agreements.

OPPORTUNITY FOR INTOLERANCE UNDER NATIONAL BOARD.

G. H. WRIGHT, M. D.,
PRESIDENT OF THE HOMEOPATHIC BOARD OF MEDICAL EXAMINERS OF THE STATE OF MARYLAND.
Fort Glen, Md.

I believe in uniform state laws. I believe in reciprocity between the state boards as preferable to a national board. A national board, having autocratic power, would be apt to abuse that power more than a state board, which is in close touch with its own people. The history of medicine shows, generally speaking, intolerance on the part of the dominating school towards schools of different therapeutic practices. This tendency to intolerance can be better held in check, I think, by the neutralizing effects of state boards.

Annular Papular Syphilis.

A marked case of annular papular syphilis in a negress is reported by Howard Fox, New York (*J. A. M. A.*, May 10), who remarks that, like keloid and elephantiasis, it is a type especially characteristic of the negro race. It is an early manifestation of the disease and a modification of the papular or discoid syphilis. The lesions apparently begin as flat papules which enlarge peripherally and clear up in the center, forming secondary elevated rings. By the coalescence of several rings various gyrape and festooned patches are formed. It is not only more frequent but, when present, it is more extensive in the negro than in the white. It occurs usually on the face but may also occur on the trunk and limbs and especially the back, usually during the first eight months after infection. Without experience, the diagnosis may be puzling, and it is most apt to be mistaken for ring-worm or erythema multiforme.

General Scientific

OCCUPATIONAL DISEASES AND LEGISLATIVE REMEDIES.*

JOHN B. ANDREWS, Ph. D.,
SECRETARY OF THE AMERICAN ASSOCIATION FOR LABOR LEGISLATION.
New York.

A remarkable development of popular interest in the study of occupational diseases has come about during the past three years. In May, 1910, in a paper read before the National Conference on Charities and Correction, it was possible only to mention the appointment of the Illinois Occupational Disease Commission, to note the completion of an investigation of phosphorus poisoning in the match industry, and to announce that the first American conference on industrial diseases had been called by the Association for Labor Legislation to meet in Chicago during the following month. Practically all of the many interesting investigations and reports on this subject have been made since that time. Practically all of the articles on occupational diseases which are based on American research have been published during the past three years.

The First National Conference on Industrial Diseases called popular attention to this subject as to a new problem. The question then most frequently asked was *"what are occupational diseases?"* Of course there were common trade maladies then familiar to most physicians and to those engaged in the respective employments. Such popular terms as "lead colic", "miners' asthma", "hatters' shakes", "potters' rot", "boiler makers' deafness", "brass workers' chills", and the compressed air workers' "bends", are merely suggestive. But we now know that practically every calling contributes its own special malady to the long list of work diseases.

The "Memorial" prepared by a committee of that first conference in 1910 laid a foundation for national investigation, and 15 states have already passed laws providing for systematic reporting of occupational diseases by physicians. The work of the one state commission led to the enactment of the Illinois law requiring monthly medical examinations of the workers in several industries where poisonous substances are used. Similar laws have been secured this year in Missouri, Ohio and Pennsylvania. Moreover, the United States Congress finally passed, in April, 1912, the anti-phosphorous match law, wihch abolishes one disease, the match workers' "phossy jaw". Another bill, now before Congress, is designed to replace the present law providing inadequate compensation for accidental injuries to certain employees of the federal government, and to extend the compensation principle to embrace also the victims of occupational diseases.

In the meantime new reports have been published on poisoning from mercury in the hat industry, or poisoning from lead in the pottery industry and in the manufacture of lead salts, and on compressed air illness among workers in caissons and tunnels. Medical inspection of factories, too, has come to be recognized as important, and Illinois, Massachusetts and New York have developed a state service for such systematic medical inspection of work places.

The Second National Conference on Industrial Diseases, in June, 1912, led to the public discussion of industrial hygiene by physicians, physiologists, factory inspectors, manufacturers, efficiency engineers, trade unionists, sociologists and lawyers. Through the medium of a joint session of the Association for Labor Legislation and the American Medical Association a valuable symposium on industrial diseases was prepared and published, together with a critical bibliography of fifty printed pages. In the latter undertaking the co-operation of the Library of Congress and the federal Bureau of Labor was secured.

The Medical Association, the Chemical Society, the Association for Labor Legislation and the Society for the Conservation of Vision are among the private organizations that have appointed committees to undertake special investigations. Three federal bureaus are now studying the question in their own respective fields, and several state commissions, bureaus of factory inspection and boards of health are at work upon the problem. The most recent of these, the Ohio Board of Health, has just secured for the purpose a special appropriation from the legislature and has engaged experts for the work.

Nature of the Problem.—The first occupational diseases to receive special attention in this country are naturally those which are most easily recognized and which offer reasonable hope of their elimination. *Phosphorous poisoning*, which occurs principally in the match industry, is so clearly defined in character, so loathsome in nature, and so totally unnecessary on account of inexpensive and harmless substitutes, that absolute prohibition was practicable. Even though it was necessary in this instance to use for the first time for such a purpose the taxing power of the federal government, the public when finally informed concerning the horrors of "phossy jaw" demanded that it be wiped off the list of diseases.

Lead poisoning is the most prevalent of all occupational poisonings to-day. Some of the striking symptoms of the disease, including colic, wrist-drop and the blue line on the gums, have also marked it for early study. Here, too, practical substitutes for lead in certain processes have resulted in prohibitive regulations in a few countries, while sanitary precautions are quite generally enforced everywhere except in the United States.

Compressed air illness, with the increasing amount of caisson work in the building of bridges, tunnels, subways and skyscrapers, has made familiar the trade disease commonly called "the bends." It would be difficult to conceive of a disease more clearly occupational in origin, and it seems scarcely possible that we will ever have at hand a remedy more strikingly scientific in form. In fact, the adoption of a regulation as simple as the multiplication table, if rigidly enforced is sufficient to eliminate practically all danger of "the bends."

Closely following these prominent illustrations will of course be added the occupational maladies caused by the anthrax bacillus, and by a long list of industrial poisons including arsenic, brass, mercury and wood alcohol. Then when the occupational skin diseases and eye diseases have been studied we may expect that more attention will be given to trade diseases of the nervous system, and so on until the field is covered.

Because more easily recognized, the striking manifestations of these diseases are first to receive popular attention. But these spectacular effects of occupational disease are trivial compared with the gradual lowering

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of vitality caused by the daily breathing of impure air and by continual over-strain. The public should know that occupational diseases referred to in such popular terms as "phossy jaw," "painters' colic" and "the bends," scarcely begin to indicate the disastrous effects of unhealthful conditions of employment.

The principal health risks in industry, as far as we now know them, may be conveniently classified according to their nature as follows:

(1) Specific industrial dusts, fumes, gases, vapors and acids (poisonous and non-poisonous); (2) Harmful bacteria and micro-organisms; (3) Compressed or rarefied atmospheres; (4) Improper lighting; (5) Extremes of temperature; (6) Excessive strain.

In what industries are these disease hazards most prevalent? How many workers are affected by them? How many die? Of how great duration is the incapacity of those who escape death? What lasting disfigurement or disability does the disease leave upon them? Are conditions improving or growing worse? Is occupational disease necessary to our civilization or can it be completely abolished? On all of these questions our information, until recently, has been almost nil. At present we have but few real records. The whole problem of education, factory sanitation and legislation upon this topic is halted, and workers unnumbered are smitten with trade diseases yearly, all for the want of a little fundamental information.

Extent of the Problem.—If we consider merely those diseases due to industrial poisons, we find already prepared a carefully analyzed list of 55, one of which alone (lead) is in daily use in more than 150 trades. The first state medical inspection of factories in Illinois resulted in the removal from a single establishment of 60 workmen who had become "leaded." The federal bureau of labor reports upon a white lead factory employing only 170 men but recording 60 cases of plumbism during the year. Out of 148 enamelers and millhands specifically examined by Dr. Hamilton, 36% were found to be suffering from chronic lead poisoning. The medical director for the Pennsylvania East River Tunnels, in 1909 reported 3,692 cases of compressed air illness, twenty of them fatal.

The Ohio Accident Commission, after careful study, declared that 75% of industrial injuries reported to it by trade unions should have been classified as occupational diseases. Careful American authorities count our industrially employed in the United States as 33,500,000 and estimate that from sickness alone our mere money loss each year is nearly three-quarters of a billion dollars. These experts further declare on the basis of German experience—"we have no corresponding data for this country"—that one-fourth of this annual economic loss (approximately $200,000,000) can be prevented, if we insist.

Prevention of Occupational Diseases.—The prevention of occupational diseases is too great an undertaking to be left entirely to individual action. It cannot be left to the worker, who, even when not ignorant of the danger, is driven by necessity to his task. It can not be entrusted to the employer whose principal business after all, under competitive conditions, is to secure profits. It cannot be left to medical treatment alone, for prevention and not after care is the remedy. Not only on account of the magnitude of the problem but also because of its nature, *the prevention of occupational diseases is properly a function of government.*

In the development of our civilization from the individualism of primitive savagery to the modern complexity of industrial society, we have created many perplexing social problems. When individuals worked singly and in a very real sense "minded their own business," it was possible for the individual worker to adjust himself or his surroundings to suit at least his own best judgment concerning personally agreeable and healthful conditions of temperature, humidity, fresh air and physical strain. But when factories were built and large numbers of people came to work under artificial conditions over which they themselves had little or no direct control, there was created a very different problem. Conditions of temperature and humidity and purity of air and labor strain, are now often prescribed by the most convenient, the most rapid, and the cheapest process of manufacture from the standpoint of selfish or thoughtless employers.

Every person in the community is interested in the conservation of the health, vitality, energy, and industrial efficiency of wage-earners. All agencies in society should co-operate in preventing unnecessary suffering and death among the producing classes. The protection of the health of the industrial worker is not an individual question. It is a social question demanding social regulation. Governmental action, however, in promoting industrial hygiene does not mean that private or voluntary efforts of the workmen, or of their employers, or of their physicians, shall be in any way minimized. On the contrary such voluntary efforts will be vastly encouraged.

It must be obvious to any thoughtful person that in preventing unnecessary occupational diseases we must have investigation, education and administration. These three requisites can, in a democracy, best be secured through legislation. Investigation is expensive. But through legislation we can set aside ample funds for scientific study. In New York State during the past two years the legislature has appropriated $110,000 to the Factory Investigating Commission, in addition to the usual sustaining funds for the permanent departments of health and of labor.

Education is expensive. But through legislation we can provide that means for the necessary dissemination of facts gained by investigation. The publication of the preliminary reports of the Factory Investigating Commission in New York have given a remarkable impetus to the task of providing sanitary work places. Reports on occupational diseases issued by the Bureau of Labor under the able direction of Mr. Hatch has stimulated wide interest among manufacturers and wage-earners. The law requiring the reporting of occupational diseases has pointed out the sore spots in industry and has resulted in valuable co-operation between physicians and factory inspectors.

Administration is essential. Protective devices often involve the expenditure of large sums of money and, under conditions of sharp competition and cheap labor in an industry, the humane and careful employer may be placed at an unfair disadvantage in dealing with his less conscientious business competitor unless there is uniform enforcement of sanitary regulations. It is only through the uniformity of regulation which legal enactments alone can secure, that the more progressive and humane employers can themselves be protected from less scrupulous competitors who would otherwise often fail to provide expensive safeguards. And it is only through compulsory regulations that the health of the employees of these unscrupulous competitors can be protected.

It frequently happens that without the aid of uniform legal regulations to force the recalcitrant minority into line, even a vast majority of the manufacturers in a given industry are unable to bring about reforms which

they freely admit are desirable. A striking example of this was the condition which culminated successfully in the poisonous phosphorus prohibition act. Match manufacturers representing 95% of the total product testified before Congress that they could not substitute a harmless compound for the slightly cheaper poison without a uniform law compelling all employers in that industry to abandon the poison. And all of the other match manufacturers, representing the remaining 5% of the product, stood out stoutly to the last, even declaring that they would close their factories before they would submit to this sanitary measure, already in compulsory operation in practically all the civilized countries of the world. It required labor legislation to end the use of this unnecessary deadly poison before "phossy jaw," the most loathsome of all industrial diseases, could be abolished.

Legislative Remedies.—The final legislative remedies for the prevention of occupational diseases are of three classes. First the method of prohibition, second the method of regulation, and third the method of compensation or insurance.

The method of prohibition may be applied in two ways. It may be used to exclude from hazardous employments those most susceptible to the dangers, as is done in a few states in a long list of occupations from which young people or women are barred. Medical examination of applicants for jobs in the lead trades and in compressed air work is a more recent extension of this idea to protect adult men. Secondly, the method of prohibition may be used to outlaw dangerous conditions or substances, as already illustrated by the poisonous match legislation.

The method of regulation, in the prevention of occupational diseases, as in other social problems, is based on the principle of toleration within limits. The majority of the people may believe that certain harmful conditions are so necessary a part of our industrial life that their prohibition is at present undesirable or at least impractical. In dealing with the social evil the adoption of this principle leads to segregation. In dealing with occupational diseases it leads in the work *places* to the installation of exhaust fans, wet processes, vacuum cleaning, separate wash rooms and eating rooms; and for the work *people* to the limitation of working hours.

This method in the field of industrial hygiene is well illustrated in the present campaign for cleanliness in the lead trades. In America we have not yet demanded prohibition of the use of lead as is done by law in certain trades in France, Germany and Belgium. We are now attempting to prevent lead poisoning by provisions for absolute cleanliness. It is hoped that through the co-operation of manufacturers and users of lead salts with their employees, the examining physicians and the state inspectors, the dangers of plumbism may be reduced to a minimum. But if this method is not adopted in a spirit of co-operation or if it fails after a fair trial, prohibition will of course be demanded.

The method of insurance or compensation is based on the principle that those individual misfortunes which cannot be prevented, either by prohibition or regulation, can best be borne by the community. When applied to industrial injuries sustained by workmen in the course of their employment, the justification for this principle is particularly obvious. It is worthy of note also that with almost startling rapidity the American people are coming to demand that workingmen's insurance be recognized as a proper function of government.

The expense of broken machines is borne by the industry, which passes the burden on to society. In recent years we have come to insist that so also should be borne the financial expense of broken legs and arms. The next step must be the extension of the same principle to include incapacity due to arms paralyzed by lead poisoning or incapacity due to other diseases of occupation. Instead of leaving the money loss, as well as the physical suffering, to be borne by the unfortunate victim or his family, the financial burden of relief should be placed upon industry where it belongs.

During the past few years the industrial *accident* problem, under the urge of impending legislation, has attracted the abilities of hundreds of experts. In addition to stringent regulations for the direct prevention of such industrial injuries, twenty states in their efforts to provide adequate relief for the victims, have boldly overthrown the discredited and out-worn systems of employers' liability and have adopted the workmen's compensation or insurance principle. No agitation has been more effective in preventing accidents than the campaign to provide for the victims a just system of insurance.

And in attempting to deal effectively with the occupational disease problem, practical people will very soon recognize the wisdom of placing upon those responsible for unhealthful work conditions, the financial burden of caring for the victims. No intelligent person can go far in the study of compensation for industrial accidents without realizing that a logical consideration of the facts must lead likewise to compensation for industrial diseases. In fact the arguments used so effectively by advocates of compensation for accidents, and now so generally accepted by all men, apply with even greater force in the consideration of relief for the victims of occupational diseases. A considerable part of the money now paid to employers' liability companies and to ambulance chasers could, under a just system of compensation, go where it belongs—to the injured workman or his family. Expensive, annoying, and unsatisfactory litigation could be reduced to a minimum. Information concerning special danger points in industry would be automatically pointed out to the factory inspectors in a manner both prompt and sure. Unnecessary occupational diseases would then be prevented, and that is the real problem.

It must be admitted, moreover, that even our discredited system of employers' liability did afford occasional relief to the victims of accidents, But even this uncertain and irregular protection, poor as it is, has in most instances been denied to workers exposed to the creeping horror of industrial disease. Occasionally, however, large awards have been made. But they, as in the case of damage suits arising out of accidents, encourage further expensive litigation. One case of wood alcohol poisoning in Ohio (Joseph Frank vs. The Herancourt Brewing Co., 82 O. S., 424) is now a matter of record. The Supreme Court compelled the employer to pay $12,500, with interest and costs, aggregating over $15,000.

But only "after five years of litigation, six hearings in three different courts, including two trips to the Supreme Court, printing of several thousand pages of record testimony and briefs, taking voluminous depositions in different parts of the country involving great expense, during which the injured workman—in this instance rendered blind—was totally unable to support his wife and family, the wife being obliged to work at nights in downtown cafes, scrubbing floors after midnight, in order to provide scant food for herself and babies while the latter slept." With the exception of occasional instances in two or three states, where claims have been paid by employers without protest, the victims of oc-

cupational diseases in America are still practically without relief.

The leading countries of Europe have already met this issue by providing compensation for occupational diseases, and the Canadian government has recently submitted a bill to accomplish the same purpose. The United States government since 1908, has had an accident compensation law applying to certain civilian employees. But victims of occupational disease in the service of Uncle Sam are excluded from its benefits. A short time ago the Department of Commerce published a report upon the operation of this law. Sixty-six closely printed pages are devoted to embarrassing questions arising out of occupational diseases contracted in the government service. One of the most urgent recommendations for a change in the law is that it be extended specifically to embrace diseases of occupation.

The injustice of the recent law is plain. One illustration among many will suffice. A man named Schroeder went to work in the federal navy yard at Brooklyn. One of our big warships, the *Ohio,* came to the dock and Schroeder was sent down into the water-tight compartments called "coffer-dams" to burn off the old coat of lead paint in preparation for a new. As a result of breathing the dust and fume, Schroeder was incapacitated for work by acute lead poisoning, and he applied to the government for compensation.

This statement was made by the attorney for the United States government:

"The question in this case is whether acute lead poisoning contracted in the course of employment is an injury within the meaning of the compensation act. If the inhalation of noxious gases is a necessary incident to the workman's employment, there can be nothing accidental in the injury resulting therefrom. This latter consideration disposes of the present case. * * *

"It cannot be said that these fumes were inhaled by accident. The fumes were necessarily produced by the work he was engaged upon. The inhalation of such fumes was to have been expected and probably could not have been avoided. Lead poisoning, under the circumstances, was the natural, if not the inevitable, result."

Schroeder got not one penny.

We owe Schroeder something more than an apology. While the federal government is publishing excellent reports on lead poisoning in the factories of private employers and is translating and distributing in fat volumes the workmen's compensation laws of European countries, can the United States afford to do less than make provision for reasonably safe work places in the government service? Can this great nation afford not to provide compensation for its own victims of accidental occupational disease?

A bill for this purpose, prepared after months of careful investigation and drafted with infinite care at the instance of the Association for Labor Legislation, has recently been introduced in Congress by Senator Kern. This bill extends the workmen's compensation principle to embrace occupational diseases as well as accidents suffered by all civilian employees of the federal government. Surely the United States should now provide for its own government employees incapacitated by industrial accidents and occupational diseases a system of safety and sanitation coupled with compensation at least equivalent to that furnished by the most progressive nations of the world. The bill now before Congress offers this immediate opportunity.

Conclusion.—At a time when the health of the nation receives thoughtful attention, and sociologists, lawyers and physicians vie with one another in pressing upon Congress the need of legislation, the effects of industries upon health call for thoughtful study. At a time when compensation for accidents received in employments is the most actively discussed phase of labor legislation the question of occupational diseases demands consideration.

We know perfectly well, for example, that a woman may work eight or ten hours a day, year after year, in some employments without apparent serious injury. At the same time, six hours a day on a busy telephone exchange may within a few years spell loss of motherhood. When we finally standardize occupations with reference to hours of labor for women, it will not come as a result of arbitrary guess-work on the part of those seeking legislation, nor will court decisions be written in such vague terms.

Gradually, and surely, but almost without realizing it, we have passed within the last fifteen years into a new period of American history. The courts are beginning to get a new perspective on life. Century-old precedents based on individualism are trembling in the balance. Here and there a judge shows clearly that he has been studying economics as well as law. Recent court decisions clearly indicate that protective labor legislation will be sustained as a legitimate exercise of the police such interference on the grounds of health.

Future labor legislation and court decisions which mark the path of social progress, will be based upon scientific study of industrial hygiene. Only through careful study can we secure accurate information which will finally enable us to establish scientific standards. The establishment of such standards is prerequisite to intelligent legislation, to enlightened court opinions, and to efficient enforcement of the law.

While such researches are under way, we should emphasize at every opportunity the following considerations: (1) all preventable occupational diseases must be prevented; (2) those occupational diseases which we do not yet know how to prevent must be reduced to a minimum; and (3) the victims of occupational disease must be compensated for their injuries by some just system of insurance.

Army Medical Corps Examinations.

The Surgeon General of the Army announces that preliminary examinations for appointment of First Lieutenants in the Army Medical Corps will be held on July 14, 1913, at points to be hereafter designated.

Full information concerning these examinations can be procured upon application to the "Surgeon General, U. S. Army, Washington, D. C." The essential requirements to secure an invitation are that the applicant shall be a citizen of the United States, shall be between 22 and 30 years of age, a graduate of a medical school legally authorized to confer the degree of Doctor of Medicine, shall be of good moral character and habits, and shall have had at least one year's hospital training as an interne, after graduation. The examinations will be held simultaneously throughout the country at points where boards can be convened. Due consideration will be given to localities from which applications are received, in order to lessen the travelling expenses of applicants as much as possible.

In order to perfect all necessary arrangements for the examination applications must be completed and in possession of the Adjutant General at least three weeks before the date of examination. Early attention is therefore enjoined upon all intending applicants. There are at present forty vacancies in the Medical Corps of the Army.

THE PUPIL IN HEALTH AND DISEASE.

CHARLES GRAEF, M. D.,
PROFESSOR OF OPHTHALMOLOGY IN FORDHAM UNIVERSITY SCHOOL OF MEDICINE; OCULIST AND AURIST TO FORDHAM AND LINCOLN HOSPITALS; VISITING OPHTHALMOLOGIST TO THE NEUROLOGICAL HOSPITAL AND ST. JOSEPH'S INSTITUTE; FELLOW OF THE NEW YORK ACADEMY OF MEDICINE, ETC.
New York.

The pupils of healthy human eyes are round in form and their size is governed by the illumination under which they are observed. When brighter light is brought near the eyes the pupils contract and they dilate correspondingly when shielded. This rule holds true for the most part even when vision is quite defective so long as quantitative light perception is retained.

The pupillary diameter in health varies greatly in different individuals. It is the result of the balance of forces maintained by the sympathetic nerves which act as dilators of the pupils on the one hand, and the motor oculi which opposes them and brings about contraction of the pupils on the other.

Stimulation of the sympathetic tends to widen the pupils by upsetting this balance and, conversely, irritation of the third nerve tends to narrow the diameter of the pupils. The sympathetic then is mydriatic in function, while the motor oculi is miotic. Anything which stimulates the sympathetic nerve fibres and at the same time inhibits or paralyzes the third nerve would cause a maximum dilation of the pupil.

Atropin for instance is such a product. It will act thus by stimulation of the pupillary fibres in one eye alone if instilled with a dropper, or on both eyes if taken in sufficient dose internally. Again eserin is an antagonist of atropin, irritating the pupillary twigs of the third, producing contraction or miosis of the pupil.

Elderly people, because of lessened activity of the sympathetic, have as a rule smaller pupils than young persons. Persons with blue eyes have also smaller pupils because here the smaller amount of pigment permits more light to enter the eye. As stimuli may affect the controlling nerves at any point in their devious courses it will be seen at once that pupil changes may be brought about by a great variety of conditions, and that the study of these variations in diseased conditions may serve as an important aid in reaching a diagnosis.

To make this clear the reader will pardon a very short sketch of the courses these nerves pursue. Pupillary contraction to light is a reflex movement, the *afferent* nerve being the optic, the third nerve the *efferent*, innervating the sphincter of the pupil.

Von Gudden's evidence has long been accepted as proof of there being in the *optic* nerve special afferent fibres for the pupil reflex quite distinct from those which give us sight; these fibres even being distinguished by the microscope. When the optic nerves are traced backward toward the brain they will be found in most animals to make a complete crossing on the front of the sphenoid bone. In many cases this is brought about by one nerve trunk penetrating a loop in the other, while in others they simply lie one upon the other, or the bundles of nerve fibres interlace.

In the higher vertebrates this crossing is *incomplete*, and in man, the highest of them, only three-fifths of the nerve fibres cross to the opposite side (the remaining two-fifths going to the same side of the brain).

Light thrown into one eye therefore travels to both sides of the brain and produces an equal reflex contraction of both pupils. This is known as the consensual pupillary reflex. The reüex arc passing upward from the optic chiasm, is along the optic tract to those masses of ganglion cells known as the corpora quadrigemina, the external geniculate bodies and the optic thalami.

From here nerve fibres of vision pass to the cerebral cortex where they terminate mostly about the calcarine fissure and the medial surface of the cuneus. Beside these nerve fibres, we are especially concerned with those which pass from the basal gangli I have named, to the motor oculi nucleus in the floor of the aqueduct of Sylvius.

These are known as Meynerts' fibres, and thus we reach the third nerve, along which motor stimuli pass to the sphincter of the pupil. The nuclei of the third nerve and of the sixth nerve of the opposite side are in close proximity, and the third nerve gets from its neighbor the fibres which it in turn supplies to the internal rectus muscle. Passing into the orbit through the sphenoidal fissure it divides into a superior and an inferior branch.

The superior supplies the rectus superior and the levator palpebrae superioris. The inferior supplies twigs to the inferior rectus, the internal rectus and the inferior oblique, and the ciliary ganglion, from the last of which we get motor fibres for the iris and ciliary muscle. The ciliary ganglion is the orbital brain of the eye. It sends sensory filaments which it derives from the nasal branch of the fifth nerve, to the eyeball generally, and motor and sympathetic filaments to the ciliary muscle and iris.

The sympathetic or mydriatic nerves have their origin in the front part of the floor of the aqueduct of Sylvius, pass downward in the cord to the upper dorsal segment, sometimes called the cilio-spinal centre. Emerging with the first dorsal nerves they pass along the carotid. From the cervical ganglion they reach in turn the cavernour plexus, the Gasserian ganglion, ophthalmic division of the fifth and the nasal branch of the ciliary ganglion.

There must also be direct communication between the nuclei of the third nerves of both sides because a consensual pupillary reaction can occur even when there is a lesion of one optic tract. To test the pupil reflex properly the patient is best placed in a moderate light facing a window, being made to look at a distant object. The eye not under observation should be carefully screened from the light. After closely noting the size of the pupil, the observer excludes the light from the eye for a moment with his hand and on removing this notes in a normally reacting eye that the pupil which has become dilated while under his hand contracts at once. This contraction is quickly followed by a moderate dilation and this again by a lesser contraction until the iris comes to a standstill. This series of movements is termed Hippus and in certain neurasthenic conditions a similar but more pronounced oscillation may be seen. The handy little electric flash lamps now so commonly used offer a convenient way of alternating light and darkness in pupil testing.

The importance of making the patient look steadily at a distant object comes from the fact that there is a pupillary contraction associated with convergence or accommodation which may interfere with a correct conclusion from the test if disregarded.

The consensual reflex of the pupil as well as the direct should always be tested, one eye being alternately covered and exposed while the motions of the pupil in the fellow eye are observed. Normally, equality in size of the pupils will exist not only with both eyes open, but also if one be shaded, for the normal consensual pupil reflex is equal to the direct reflex. Finally it should also be noted whether the direct pupil reflex is similar in all respects in each eye.

In examining the pupils the contraction of convergence should also be tried. If the patient be blind of both eyes he can be made to converge by calling on him to direct his eyes to his own hand held at 12 inches

distance. If both convergence, contraction and light reflex are wanting, a lesion in the centrifugal pupil fibres is indicated. If only the light reaction is wanting the lesion is in the course of the centripetal fibres.

Dilation of the pupil is probably due to an *inhibitory* action of the sympathetic though there are also some radial contractile elements in the iris. The exact mechanism of the dilation is not clearly established.

Light is the only stimulus capable of bringing about a *reflex contraction* of the pupil, but the *dilating* centre responds to every sensitive stimulus—e. g., the prick of a pin, a pinch on the neck, galvanism applied to the leg, the tickling of any sensitive area of the face supplied by the fifth nerve, or indeed by the nerves of common sensation in any part of the body.

Even stimulation of the skin of the affected side in hemianaesthesia, as also in sleep and in coma, will find response in dilation of the pupil.

All the dilating fibres do not run to the eye in the cervical sympathetic for the reflex takes place even if the cervical sympathetic is divided. Some psychical emotions produce dilation of the pupil. The pupils of an angry cat dilate, as do those of a frightened child. In delicate, nervous and excitable people the pupils are much and habitually dilated. Deep sleep, or complete general anesthesia, produces contraction of pupils, for then all psychical and sensitive stimuli are reduced to the minimum.

With every deep inspiration or expiration a considerable pupillary dilation occurs which is said to be due to simultaneous stimulation of the respiratory and pupil dilating centres by the carbonic acid gas in the blood.

Marked dilation at the beginning of each labor pain is explained as an associated action of the neighboring centres for pupil dilation and uterine movements.

Hyoscyamin, scopolamin and daturin, like atropin, excite the pupillary branches of the sympathetic and paralyze the pupillary branches of the third, bringing about a maximum dilation.

Cocain has only the first of these two activities—local irritation of the endings of the sympathetic in the iris, both of the vaso-constrictor and of the pupil-inhibitory fibres. Strychnin and curare are not real mydriatics. Dilation produced by poisoning from these drugs results from retention of carbonic acid gas in the blood.

Of miotics, eserin is the best example, pilocarpin and muscarin act similarly, but with less energy. Chloroform in the first stage of anesthesia stimulates the pupil-dilating centre, and in the second stage gradually reduces its excitability until finally this is completely paralyzed, so that no form of stimulation causes any dilation.

Following this is further contraction to a pin-hole pupil due to stimulation of the pupil-contracting centre and the most serious consequence for the life of the patient.

Miosis may be due to disease causing irritation of the pupil-contracting centre or nerve-fibres, *irritation myosis*, or by one causing paralysis of the pupil-dilating centre *paralytic miosis*, or by a combination of both.

Either cause alone produces a medium miosis—a combination of the two would give a maximum miosis. Irritation miosis is not usually increased by light stimulus, nor by convergence, nor does it diminish in the shade.

Mydriatics dilate such a pupil widely, miotics contract it ad maximum. In paralytic miosis the pupil reacts well to light and on convergence but does not dilate on application of sensitive or psychical stimuli or with coordinated motions. Mydriatics dilate such a pupil only partially. Miotics contract it ad maximum. In maximum miosis every reaction is wanting, strong mydriatics alone producing a medium dilation.

Irritation miosis is found in:

(a) The early stages, at least, of all inflammatory affections of the brain and its meninges; in simple, tubercular and cerebro-spinal meningitis. In these diseases when medium miosis gives place to mydriasis, it is a serious sign indicating depression with paralysis of the third nerve.

(b) In cerebral apoplexy the pupil is at first contracted and this contraction is a diagnostic sign between apoplexy and embolism, in which latter the pupil is usually unaltered.

(c) In the early stages of intra-cranial tumors seated at the origin of the third nerve or in its course.

(d) At the beginning of an hysterical or epileptic attack.

(e) In tobacco amblyopia.

(f) In persons following certain trades where long-maintained effort of accommodation is demanded—watch-makers, engravers, etc.

(g) As a reflex action in ciliary neurosis, consequently in many diseased conditions of those parts of the eye supplied by the fifth nerve.

Paralytic miosis occurs in spinal lesions above the dorsal vertebrae, such as in injuries and inflammations, especially of the chronic form.

The contracted pupil occuring in gray degeneration of the posterior column of the spinal cord has long been known as *spinal miosis*. In the early stages this miosis is but medium in degree and reacts both to light and convergence. Later on when Meynert's fibres are affected we have the Argyll-Robertson pupil. The very minute pupil often seen in tabes is probably due to secondary contraction of the sphincter pupillae.

Tabetic pupils are, however, not habitually contracted and may even be dilated. The miosis is an important sign of disease of the posterior columns while the Argyll-Robertson reaction indicates disease at some distance from the spinal cord; whether this lesion is in Meynert's fibres or is nuclear is a question.

Paralytic miosis is also found in general paralysis of the insane. In acute mania the pupil is usually dilated and when this is followed by miosis, approaching general paralysis may be looked for.

In bulbar paralysis, if paralytic miosis occurs, the case is probably complicated with progressive muscular atrophy or with sclerosis of the brain and cord. Miosis may be due to paralysis of the cervical sympathetic as a result of injury from pressure as by aneurism of the carotid or aorta, or by enlarged lymphatic glands. Apoplexy of the pons also causes a miosis.

Mydriasis from disease may likewise be:

(1) Irritation or spasmodic mydriasis due to irritation of the pupil-dilating centre or fibres.

(2) Paralytic mydriasis, due to paralysis of the pupil-contracting centre of fibres.

The first results in a moderately dilated pupil, contracting somewhat to light and on convergence, but not dilating on sensitive or psychical stimuli. Easily dilated by mydriatics but contracted with difficulty by miotics.

The second is characterized by a moderately dilated pupil reacting to sensitive and psychical stimuli.

If the lesion lies between the iris and the pupil-contracting centre, the direct and consensual reaction to light is wanting as is also the convergence reaction. But if the lesion lies between the retina and the pupil-contracting centre the contraction to light is wanting while the consensual contraction and that of convergence remain.

In either case the pupil can be dilated ad maximum by mydriatics, but not contracted more than to medium size by miotics.

Irritation mydriasis occurs:

(a) In hyperemia of the cervical portion of the spinal cord and in spinal meningitis.

(b) In early stages of new growths in the cervical spinal cord.

(c) In cases of intracranial tumor and other diseases causing high intracranial pressure.

(d) In the spinal irritation of chlorotic or anemic persons, as after a severe illness.

(e) As a premonitory sign of tabes.

(f) Intestinal worms or other forms of irritation of the sensitive nerves of the bowels.

(g) In psychical excitement.

Unilateral mydriasis occurring at short intervals, now in one eye now in the other, is, according to Von Graefe, a premonitory sign of mental derangement.

Paralytic mydriasis (iridoplegia) may be due to paralysis of the pupil-contracting centre or as the result of stimuli not being carried from the retina to that centre.

It may be seen:

(a) At times in progressive paralysis where at first there was miosis.

(b) Basilar brain lesions affecting the nucleus of the third nerve.

(c) Orbital diseases causing pressure on the ciliary nerves.

(d) A late stage of thrombosis of the cavernous sinus.

(e) Glaucoma.

(f) In cases of intra-ocular tumors which have reached a certain size.

If the light is not transmitted to a healthy pupil-contracting centre, contraction will take place only on convergence.

If the lesion lies in the visual centre or in the fibres connecting this centre with the corpora quadrigemia the reaction of the pupil to light will be perfect even if the patient is absolutely blind.

Paralytic mydriasis due to non-conduction of light stimulus is found in most cases of optic atrophy.

Theoretically a normal pupil with paralysis of all the extra-ocular muscles supplied by the third nerve except the internal rectus would indicate a nuclear lesion purely, while if the internal rectus were included in the paralysis with pupillary dilatation, an extra-nuclear lesion would be signified since the fibres of the internal rectus are derived from the sixth nucleus of the opposite side.

But practically, lesions are rarely so closely limited as to avoid injury to neighboring territory, and again if the lesion is irritative rather than destructive we might be misled by an increased miosis where a mydriasis would be looked for; and toxins may have a selective quality for certain fibres leading us to suspect a lesion where none exists.

1076 Boston Road.

It is comparatively rare that tuberculosis affects the eyes primarily, but it occurs sufficiently often for one to be on guard. Tuberculosis may affect the iris and other portions of the eyeball, as well as the lids, and is apt to be overlooked by the general practitioner more often than by the oculist. When examinations are made by a general man he should be in touch with a specialist, to be able to refer cases requiring it, to a man of wider experience in diagnosis.

THE EARLY DIAGNOSIS AND TREATMENT OF TUBERCULOSIS IN THE BLOOD.

ROBERT L. WATKINS, M. D.,
New York.

In my opinion two of the greatest men of medical science of modern times were Professor Antoine Bechamp and Dr. J. H. Salisbury. The former was a Frenchman of rare keenness, who spent the best part of his active days at the University of Montpelier. The latter was an American investigator, and for a long time a medical practitioner. Both of them were chemists and microscopists, and both had the analytical as well as the "microscopic" eye. Salisbury died at 80, although he undoubtedly shortened his days by too ardent continuous attention to his work and to research far ahead of his time. Professor Bechamp lived to the age of 93, pensioned by his government. He was in possession of all his faculties and wrote for science up to the last and died by his faith—a Catholic.

I trust it is within my power to amalgamate the work of these two men, to remove it from the chaotic field of the kaleidoscope, and place it before the normal lens, so that all can read it and understand.

The microzyma is the smallest "organ" of the body, if I may be allowed the term. Its average size is about 1/50000th of an inch in diameter. It might properly be called a cell, for it is the smallest normal constituent of the human body, of plants and of all animals; yet it composes the cells which we know today are part of all animal and vegetable life.

Professor Bechamp does not claim to have originated this "idea," but he proved it, after many years of labor, and showed it to be a ferment—a small ferment, as the name "microzyma" means—and when the term "microzyma" is mentioned, it must be understood that it is a normal, healthy organism. If a germ is seen in the blood or tissues, even if it is called a micrococcus —it may be known that it originated from a microzyma, and that microzymas enter into its composition.

It is curious that this great work on the microzyma was done in the University of Montpelier, France, probably the oldest university in the world, located in a city which 600 years ago was considered to possess the most salubrious climate in the world. Here all consumptives were sent by European physicians to recuperate, following the same plan adopted by New York medical men to-day in regard to the Adirondacks.

The microzyma was demonstrated by Bechamp in 1857 to be the basis of all physiological life (destroyed only by heat and fire), but it remained for Salisbury to show that abnormal fermentation in the stomach, intestines and tissues is the cause of many diseases, especially tuberculosis.

These abnormal fermentations are transformed microzymas. It was Salisbury who showed that these fermentations are found in the blood stream, that they accumulate there in both the very earliest as well as in the last stages of this world-wide disease. Salisbury claimed these ferments to be acid yeasts—vinegar yeast or mycoderma yeasts.

This is the first product of the deformed or devoluting microzyma under certain conditions, and those conditions are very often present, as is evidenced by so many cases of tuberculosis.

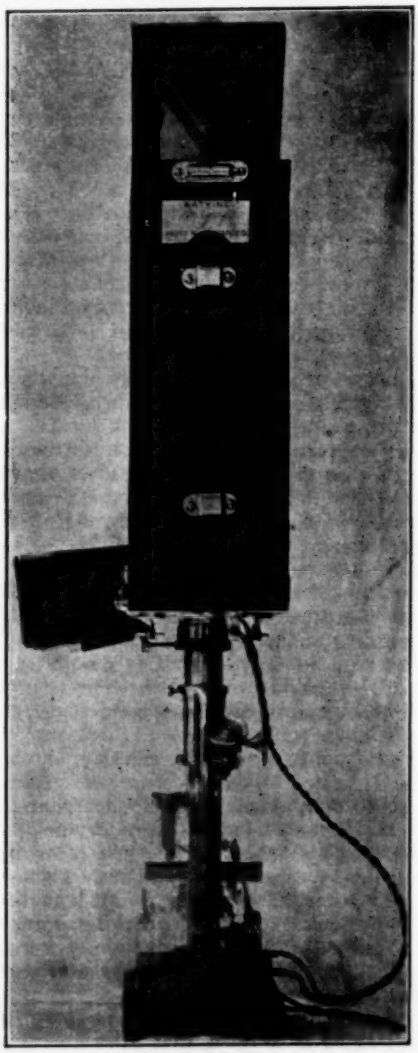
The blood stream, I repeat, is the first place where they are visible, and it is the zymase of this fermentation that causes the blood cells to be sticky and adhesive.

The tubercle bacillus of Koch is an after-product of this yeast and its products. The tubercle bacillus is

not found when this yeast is first present—the yeast is a forerunner and also an after-product of tuberculosis. In whatever organ a tuberculous lesion is located the blood shows it, and it shows it first, last and all the time until it is removed.

This "Salisbury" yeast when mixed with leucocytes or with other bacteria, I have taken the liberty of naming tuberculous matter, although this term will not be necessary when the subject is fully understood from the standpoint here presented.

It will thus be seen that the only logical way of determining tuberculosis is by a fresh blood examination. In trying to demonstrate this fact, however, to physicians unfamiliar with this class of work, the demonstrator will meet with the difficulty of finding this matter present in people who not only have other diseases, whose lesions are well marked, but also in those who manifest no disease whatever. At the same time it must be remembered that tuberculosis of to-day, when it comes to diagnosis, is more often found, and thus more prevalent than it has been in any previous period of medical history; but when it is remembered that its fermentations originate in the stomach it is not to be wondered at. In order to see its products in the blood it must be freshly drawn and examined immediately, because they are transformed under the influence of the oxygen of the air, and disappear. To preserve a record of this yeast and also the blood cells it is my custom to make a photo-micrograph immediately. For that purpose the most convenient apparatus is the migraf.



THE MIGRAF.

When this system of fresh blood examination for tuberculosis is adopted, as it must be sooner or later by the profession, it will be the easiest means of eradicating tuberculosis that has yet been adopted. This eradication will only be possible, however, by a careful and persistent blood examination of suspected patients, and when discovered, by the enforcement of strict hygienic and dietetic measures. If this system were adopted by the boards of health, for example, they could appoint physicians who would examine the public school children and detect at its very incipiency the presence of this product in the blood. At that time it can be thoroughly removed. Repeated examinations by the physician for a period of a month or six weeks will determine the presence or absence of the product. The growing child will naturally eliminate this difficulty much easier than an adult, and, therefore, the place to locate this trouble is in the child by means of fresh blood examinations, strictly carried out, with a carefully preserved record of the blood conditions from month to month.

138 West 71st St.

THE TRUTH BEHIND YOUR DREAM.*

LEONARD KEENE HIRSHBERG, M. A., M. D. (Johns Hopkins),
Baltimore, Md.

Across a sea and a continent, beyond the Cisalpine mountains, even yonder behind Napoleon's Austerlitz, Professor Sigmund Freud of Buda Pesth and Vienna, reigns as a modern Genii, with a newer kind of magic by which dreams are translated into real facts. Dr. Freud has succeeded, according to his adherents among the scientists and physicians of Europe, Japan, and America in removing all mysticism and superstition from dream life, and has triumphantly placed the interpretation of dreams upon the secure foundation of the newer and even marvelous scientific methods.

Professor Freud's fundamental thesis is that the dream is a complex mental tapestry, an acknowledged and manifest vagary of the mind which conceals some suppressed truth. One of his writings, *Der Traumbedeutung*—the Significance of Dreams—has recently been translated by Dr. A. A. Brill of New York, and is the largest volume ever written by a scholar upon the subject of dreams. He publishes therein a list of objects which when found in dreams, can be always interpreted to mean something else in your waking life. There, too, he gives examples of various dreams that were related to him by friends and patients, and in a series of brilliant analyses, traces out the most obscure, hidden and sublimated events of the dreamers' lives.

To diagnose nervous and mental maladies, this symbol of sleeping images is made practically valuable by physicians, by lawyers to expose their clients' forgotten experiences, and by detectives to unfathom obscure mysteries. The fanciful phantasmagory of a dream, contains the hidden springs of action of your waking life as well as the long forgotten or even unconscious events of your infancy, babyhood, youth, adolescence, and early adult days.

Curiously enough—and this is where some Americans as well as other followers of the Viennese physician

*Read at the Fourth Annual Meeting of the American Association of Clinical Research, November 9, 1912.

diverge from the Freudian hypotheses—all dreams are remotely yet directly traceable to the mating incident which is normally considered as necessary to the safety and multiplication of the race. Every fleeting midnight fancy, every woven, dreamy state, if its symbols are correctly transposed into waking thoughts, will indubitably be shown to contain one such suppressed wish. The true Freudians maintain that even though a little boy dreams of lallygagging with his father, or the father dreams fondly of a childhood boy-friend, it is yet a mating instinct of a primitive type. Suppressed or repressed instincts such as these are the normal feelings of all infants. Instead of normal adult instincts that aim at possession of the opposite sex, there is in early childhood a "homo" yearning for the same sex as well as an Oedipus complex. In adult waking life this has been by education, training, association and civilization, completely suppressed, drowned out, hidden and covered up by the rigid systems of normal habits. The only time that this homosexual instinct openly manifests itself in adult life is when certain dream symbols which indicate it appear. These are enumerated in the book of Professor Freud and the papers of Dr. Ernst Jones of Toronto, Canada. Insanity, hysteria, nervous ailments, and absent mindedness or day dreams, all allow this unchecked cerebral state to expose itself.

Then is it that the psycho-analysist trained in the methods, gets in his fine work and by means of this newer higher critcism, this modern Rosetta stone of dream interpretation, he succeeds in searching out with dictagraph-like thoroughness, the innermost recesses of your soul.

The other day, a patient who had heard one of my lectures on the Freudian analysis of psychic states, related to me the following experience, and asked for its explanation. "About a year ago, I dreamed that my brother-in-law arose from his bed in his pajamas, walked quietly to a window in his room—a second story one—paused for a moment, and then jumped out. He was killed, although I did not see him dead in the dream." This was the end of the dream, but: "A short time after this dream, which I felt was a divine premonition, my brother-in-law was brought home killed. He had been hit over the head with the rung of a chair."

Now the analysis of this dream was reluctantly but unequivocably admitted to be correct by my patient, Miss D—— It was as follows:

The patient, Miss D——, is a highly neurotic maiden lady, given much to patronizing palmists, mystics, mind readers, fortune tellers and spiritualists. She unconsciously had a suppressed and unrecognized mating instinct towards her handsome brother-in-law. This was symbolized in the dream by his manly form pictured in outline by way of his pajamas. This longing, concealed completely from her waking consciousness was shortcircuited in the symbolic dream into the displaced or "sublimated" fear that he would—the suppressed wish that he would not—be killed, and thus lost to her forever.

Now he was a drinking man, and when much gone in liquor, was mostly of a quarrelsome, fighting disposition. Several times he had been seriously injured in street brawls. Here then was the source of the *"divine premonition."* With the knowledge that he was eternally scrapping, and getting the worst of it, came the certain impression that he would sooner or later fall an inevitable victim to such sprees.

Thus the unconscious love of his person—*pajama* symbol, and the knowledge of impending death as evidenced in the many past injuries—*fatal-fall* symbol, brought the analysis to completion.

Often indeed, the exposure of his suppressed wishes brought to the individual's attention by dream analysis, is little less astonishing to the person, than to the expert. I have several times succeeded in tracing lost jewelry and valuables, supposed to have been stolen, by tracking down the hidden object by way of dreams. There is neither magic, occultism or mysticism in this. It is strictly a matter-of-fact method of Munsterbergian gymnastics and Freudian *Traumbedeutung;* the allegory or mythological picture of the sleeping, unchecked brain, and a common sense reading of the secret script.

Freud puts briefly into a hypothetical law, the whole story of the dream. Every dream passes, says he, through a condition of contraction, narrowing, or crystalization; only to be followed by its dislocation, into a diminutive or exaggerated pose for its third position amidst rare scenery. In other words, any actor or object elaborated in a dream, is first disguised, then enlarged or diminished or caricatured, and finally given a role in the moving mental scenario. This role is usually the symbol of a wish long hidden from your happy or painful—as the case may be—waking life, but usually realized in some bizarre manner, during your painless sleep.

One of my patients, Miss M——, a trained nurse, is a romantic young person, whose childhood was spent upon the large estate of her one-time wealthy parents. There she romped and rode together with two brothers nearly her own age.

Recently she had this dream. She was a boy dressed in breeches and buckskin at the Court of St. James. She saw herself as the illegitimate and unacknowledged son of the Duke of Buckingham. As this character she and another young swashbuckling blood of the court circle, were both in love with the same person, evidently a princess or young woman of distinction. Suddenly while he (she) was making amorous protestations of devotion to the princess (?) the other swain burst through the (unbroken) door, and they fought a duel. Miss M——, as young Buckingham, is wounded, and the dream became confused or ended.

The analysis of this dream briefly was that the romantic memories, combined with much historical novel reading, had elicited a longing for that robust, outdoor life of her happier childhood. A certain married gentleman had also given her an indication of unsolicited affection which did not appeal to the dreamer. The duel symbolized a quarrel with the man's wife and a willing defeat at the latter's hands.

Instances of the sort of dreams described by Dr. Freud in his volume, which prove that successes are won, ambition attained, and unfulfilled wishes always gratified in lieu of the bitter disappointments of waking states, can be cited from everybody's experience.

Miss L——, another patient, about sixteen years old, narrated this dream. Employed as a typist, she came in daily contact with the son of her employer. He merely dictated a letter or two each day, and had never otherwise indicated any interest in her. She dreamed that he asked permission to call upon her, and she consented. He appeared *in her bedroom* and kissed her, when the dream changed, and he was escorting her up a broad stairway of what was evidently his home. His mother and sister, all powdered, puffed and crinolined like story-book dowagers and offspring, refused either to acknowledge the son's introduction to her or admit her into their home as his wife. She was abashed and downhearted and woke up in tears.

The interpretation of this dream is so apparent, the gratified longing is so open, that Miss L—— could not deny the meaning.

Miss D—— was the constant companion of one of four brothers. The comraderie between them was of the Damon and Pythias sort. She dreamed one night that her brother was dead in his bed, and had nothing over him but a sheet. She could not make her mother or the rest of the family realize that he was a corpse. They answered "all right," when she apathetically told them, but they continued to attend to their regular duties, and she became so amazed that she woke up the dead brother and told him about it.

Seeing the form of the brother was proof that she held even more than a sisterly regard for him, and the apathy and disinterestedness of the family was the attained wish of a closer relationship with him than was ever covertly realized in her waking, conscious moments. Finally the restoring her brother to life and understanding was the wish to have him understand that a closer entente existed between them, than between others in the family.

But much knowledge remains to be acquired about the psychology of dreams. As much as the searching rays of the Freudian calcium has penetrated the Stygian copses of the sleeping brain, as far as the kymographic stylus has explored the ant hills of dream mysticism and spiritistic flapdoodle, there are many obscure, tortuous and devious mental chasms, as well as phantasmagorical waterfalls, that need exploring, excavating and explaining.

The premise of Freud may or may not be true, his sex wish hypothesis, and symbolic mask and wig interpretation of that premise, may or may not be a *reductio ad absurdum*. Yet withal, we must use the rough instruments at hand until better ones be given us, and no one will deny that a poor stick to beat a mad dog is better than no stick at all. Analogously, much knowledge is the outcome of this psycho-analysis, many maladies are intelligently explained away, and in the hands of such adepts as Detective William J. Burns and District Attorney Whitman, criminals are thus quickly detected. At present who can expect more?

Retardation.

There is an abnormal mental state known to alienists as retardation. In psychiatry it is applied to patients who exihibit a retardation of ideation. The power of the mind to think and to initiate action based upon sane thought in the presence of conditions which ordinarily impel one to act is lessened. It seems to us that the same deficiency is often seen in respect to groups as well as to individuals. It accounts for much of so-called conservatism, or at least of ultraconservatism. It has accounted for the *laissez-faire* policy of the medical profession, in a measure, in the face of evils that call for action. We mean such evils as the abuse of charity, the remedies for which lie in the profession's own hands. It accounts for many of the individuals who justify their medievalism as regards the problem of poverty with the specious plea that we will always have the poor with us, willy-nilly. It accounts for the people who refuse to consider eugenic proposals in any other than a cynical spirit. It explains the reactionary attitude of the smug capitalists and so-called philanthropists who cannot conceive of the passing of the tenement house and talk only of model tenements and the abolition of dark windows. It accounts for many of those who have no sympathy with the forging of the newer weapons of democracy. It accounts for those who insist that whatever is is right and who refuse to believe that the present social order can be superseded by a better one. There is a psychiatry that should concern itself with groups and with group therapy.

Current Orientation

THE ARTIFICIAL PRODUCTION OF IMMUNITY FOR THE PREVENTION AND CURE OF DISEASE.

CAUSES OF FAILURE IN TREATMENT.

F. E. STEWART, PH. G., M. D.,
Philadelphia.

(Continued from p. 147.)

The following are some of the possible causes of failure in the use of bacterial vaccines:

Non-Recognition of the Infecting Bacteria.—A most essential factor in bacterial therapy is the identification of the infecting organism. This can be demonstrated by examination of the tissues or fluids from the infected zone. But many physicians are not sufficiently posted in bacteriology to do this work or to recognize the identity of the infecting bacterium; and rather than put patients who cannot afford it to this expense they do the best they can under the circumstances, and inject a stock bacterial vaccine of the kind they have reason to believe is the proper one to use. That a certain proportion of such cases fail is but natural.

Unrecognized Mixed Infection.—One correspondent used Neisser bacterin in a case of cystitis of supposedly gonococcic origin, but without improvement in the patient's condition. A bacteriological examination revealed the presence of colon bacilli, and coli-bacterin was then used. This was followed by much improvement; but a cure did not result, and another examination was made. This demonstrated the presence of gonococci in abundance; treatment with the Neisser bacterin was then resumed, and complete recovery followed.

Acne bacilli and staphylococci are frequently associated with acne, and pneumococci with staphylococci are generally present in bronchopneumonia. Staphylococci, streptococci and other germs exist together in tuberculosis, and mixed infection is said to be the cause of death in most tuberculosis cases. Friedlaender's bacillus, micrococcus catarrhalis, bacillus influenzæ, etc., are all found in catarrhal infections. Mixed infection often requires a mixed bacterin treatment, and cases unsuccessfully treated with stock vaccines should not be pronounced failures until autogenous vaccines have been used.

Failure to Bring the Blood With Its Opsonins in Contact With the Invading Microorganisms.—Bacterial therapy is in some cases dependent upon the flushing of the focus of invasion by the enriched blood and lymph. The latter is favored by local applications of heat, such as poultices, etc., hot salt solution, rubefacients, the use of various methods of hyperemia, such as that of Bier, etc., surgical incision, aspiration, massage and the internal use of drugs, such as citric acid, sodium citrate, etc., which decreases the coagulability of the blood, or calcium salts, which increases the same.

Wright lays great stress upon accessory and concomitant treatment. While it is true that brilliant results sometimes follow the use of bacterins without paying attention to accessory and concomitant treatment, yet a physician has no right to expect good results from bacterial therapy unless proper attention is given to the principles of treatment enunciated by Wright. It must never be forgotten that Nature in her attempts to protect the surrounding tissues from infection walls off the focus of invasion. A dam is thus erected which ofttimes prevents the proper circulation of the enriched blood and lymph within the infected area. This is specially

true in regard to staphylococcic infection, such as boils, carbuncles, etc. Of great importance is the question of blood coagulability. If the coagulability is above normal proper circulation in the invaded area is impossible, and failures in bacterial therapy are sometimes due to this fact.

Surgeon Barton Lisle Wright, U. S. Navy, reports a case in which the importance of following this advice is shown very clearly. The case was one of gonorrheal arthritis of both knees, several months' duration. On first using Neisser bacterin therapeutically there was a very marked improvement, which, however, had subsequently ceased. As it was found that the attending physician was provided with apparatus for producing hyperemia by the local application of heat, the consulting physician advised that this be employed. The electric light bath was used and excellent results were obtained by its employment, together with continued treatment with the bacteria.

Failure to Recognize That Bacterins Differ in Properties and Potency.—The difference in bacterial vaccines regarding their properties and potencies is well illustrated in a comparison between tuberculin and Neisser bacterin. Tuberculin is an active poison to the tuberculous. It should be given in minute doses, whereas other bacterins may be given in large doses with safety. The initial dose of tuberculin "R" is .0001 mg., gradually increased for effect; and care must be used to prevent the occurrence of dangerous reactions. The initial dose of Neisser bacterin varies from 20,000,000 to 3,000,000,000, and the reaction produced by the larger doses may be comparatively mild or entirely absent.

THE VALUE OF BACTERIAL THERAPY.

In discussing the value of bacterial therapy I will quote a few facts and statistics concerning a well-known disease in which bacterial therapy, both curative and prophylactic, has met with remarkable success—I refer to typhoid fever.

Vaccination Against Typhoid Fever.—Next to tuberculosis and pneumonia, typhoid fever is the most deadly of diseases. In the United States it infects fully 500,000 people every year, and of these every seventh person dies. The monetary loss to the country is estimated to be $350,000,000 annually. It is a worse foe than the enemy in case of war. Far more deaths are caused by it in the armies of the world than ever resulted from actual conflict.

Typhoid fever is a filth disease. It is caused by bacteria which grow in filth. Flies light on the filth and then on our food, and carry the deadly germs from one to the other. Rains wash the bacterial contaminated filth into our streams and we are infected from the water supply.

The germs get into the milk from contaminated water used to wash cans. And there are many other ways by which infection is carried. Some persons recovering from the disease become "typhoid bearers," harboring the germs in their bodies for years.

Sanitation will greatly decrease the amount of typhoid fever. Screening food from flies is very important. But, in spite of all precautions, epidemics of typhoid fever still sometimes occur.

Vaccination against typhoid is now employed by all of the important armies of the world, with the most brilliant results. All officers and men in the U. S. Army under 45 years of age must submit to it. The results are truly wonderful, as the following statement by President Taft, in an address before the Medical Club of Philadelphia, May 4, 1911, will show:

"The percentage of typhoid cases (in the Spanish-American War) was so high that it was hard to believe that of 120,000 men there were 20,000 cases, with a case mortality of 7 per cent. Of the volunteer regiments mobilized during the Spanish-American War, 90 per cent. became infected with typhoid fever within eight weeks from the date of mobilization. To-day, two months after mobilization (of troops on the Mexican border), with the modern health regulations and by use of vaccination against typhoid, not one case of typhoid has appeared in the entire force, except that of one teamster, who was not vaccinated. It is hard to credit the accuracy of such record. But, as I have it directly from the War Office, I can assert it as one more instance of the marvelous efficacy of recent medical discoveries and practice."

Method of Vaccination Against Typhoid Fever.—Vaccination against typhoid fever is accomplished by injecting beneath the skin, with an ordinary hypodermic syringe, a suspension of killed typhoid bacilli in saline solution. The first dose is 500,000,000 killed bacteria. Ten days later a dose of 1,000,000,000 is injected in the same manner, and ten days afterward the third and last dose, amount same as the second dose, is given.

Following the injection there is a certain amount of reaction, almost unnoticeable in most cases, and more severe in others. This reaction is characterized by more or less lassitude, perhaps fever, and sometimes by a sore arm. No serious results are to be apprehended.

The duration of immunity conferred by the vaccination is not yet known. Firth puts it at 30 months. Leishman recommends revaccination in two years. In the U. S. Army the men re-enlist once in three years. The rule now is to revaccinate at each enlistment.

Treatment of Typhoid Fever With Typho-Bacterin.—According to Wright, the aim of bacterial therapy is to employ in the interest of a diseased portion of the body the unexercised powers of the healthy portion. In typhoid fever we have a local infection of the large intestine, chiefly confined to Peyer's patches. While there is often a grave general toxemia, the bacillus typhosus is known not to be present in the superficial structures of the body, and the immunizing powers of these tissues have consequently not been stimulated against that infection. We, therefore, have a field in which to artificially develop antibodies, which, when formed, will enter the blood stream and find their way to the large intestine, where they will very materially aid in destroying the bacteria and thus bring about a cure of the disease.

Occasionally one injection of typho bacterin aborts an attack of typhoid fever, the temperature drops to normal, as shown by the temperature chart, and this is followed by a rapid subsidence of the other symptoms.

Dr. E. E. Allen, quoted by Watters and Eaton, in a paper published in the *Medical Record* for 1909, vol. lxxv, p. 93, notes as a very unique and interesting phenomenon the fact that repeatedly in apparently serious cases of typhoid fever, presenting all the usual symptoms, the whole complexion of the cases was in a few days changed for the better, going on to a rapid convalescence. After but one treatment some of them began immediately to improve in every respect. The fever became less, the headache and backache disappeared, the tongue cleared up, and they began to complain of hunger. Most of them would say, if asked, that they felt better, and that, also, very soon after the initial treatment. Such brilliant results are apt to be misleading. The tendency is to expect similar results every time and to be disappointed.

What have we a right to expect? According to

Watters and Eaton, when typho-bacterin is used early in the disease its course is materially shortened. Even in those in which the injections were not given early in the disease the clinical symptoms showed distinct improvement after the injections, and the disease ran a very mild course.

Sappington reports distinct, prompt and usually beneficial effects on the general symptomatology, temperature, course and opsonic index.

Fletcher says that in all of the cases that he treated the general condition of the patient improved, and in three of the cases the action of the bacterin was nothing short of marvelous.

Leishman found that very small doses of typhoid vaccine, up to 50 million, produced no evil effects, and also no good effects. When raising the dose, however, up to 300 million or 400 million, and repeating every four or five days, better results were obtained. If the dose was given in the morning there was a reactionary rise of temperature of 1° or 1.5° F. above what would have been expected on that evening, and was followed next day by a considerable drop in the temperature, which remained comparatively low for two or three days after the inoculation, after which it began gradually to rise again. If, at this moment, the injection was repeated there was the same sequence of symptoms, and after three or four vaccinations the temperature fell to normal and usually did not rise again. There appears to have been no doubt as to the improvement and general condition of the patient, the complete absence of the typical typhoid facies being noticed. The patients were rosier, seemed in good condition and felt better. It was remarkable also that in several instances the men asked for the inoculations to be repeated; in the case of an officer, he said that, in spite of the rise of temperature which followed his inoculation, he felt from that moment a distinct change for the better, "and never afterwards looked back." Captain Smallman treated 36 patients, of whom two died, but he noticed an unusual freedom from relapse and complication in the remainder. Some of the other medical officers who tried this treatment in a spirit of profound skepticism were subsequently anxious to try the method in other cases.

Leishman believes that vaccine treatment is one of the greatest steps forward that medicine has made in recent years, and that it has many possibilities before it. He believes, moreover, that the question of dosage is one of the most important in successful treatment.

Wilson reports six patients treated with anti-typhoid vaccine, all of whom progressed favorably, making a rapid convalescence and showing no tendency to relapse. He states in conclusion:

"The point that struck me most was the absolute difference in appearance of the cases of enteric treatment with vaccine to other cases I have seen. They all looked so much fresher and more robust, with no anxious appearance, and all volunteered the information that they felt decidedly more comfortable after the injection."

Callison treated 24 patients with typho-bacterin. One of these received but one small dose; one was treated during what appeared to be a beginning relapse, but returned to normal so quickly that it is now doubtful whether it was a true relapse or only a recrudescence of fever. A third patient showed a normal temperature so soon (fourth day) after the vaccine treatment was instituted that it is doubtful if it was influenced by the vaccine treatment. In the 21 remaining cases there was one true relapse and three deaths. One of these occurred after the patient left the hospital, as cured, of a femoral phlebitis and its sequelæ. One was due to lobar pneumonia, and one to meningococcus septicemia. No instance of death from the usual causes occurred in 24 cases, but all were due to very rare conditions.

Hemorrhages occurred in three cases, but none severe enough to be dangerous. The series was remarkably free from complications, and it was the almost universal testimony of those who came in contact with the patients that they seemed better for the treatment. They lost the "typhoid facies," seemed brighter, slept better and appetite returned sooner than in cases not so treated.

Callison collected 323 cases in which the treatment was with vaccines in doses of various sizes, and states as follows:

"Among the 323 cases there were 17 deaths, or 5.2 per cent., and 20 relapses, or 6.2 per cent. Among the deaths are two in the series reported by Watters and Eaton that were hopeless or dying when the vaccine treatment was instituted. Such cases should be charged to deaths under vaccine treatment only when all of a large series are receiving the treatment. Without these two deaths the 323 cases show a mortality of 4.6 per cent. The death rate in typhoid is variously stated by different authorities: Allbutt, 17 per cent. for England; slightly less for continental Europe, 14 per cent. Osler, 5 to 12 per cent. in private practice; 7 to 12 per cent. in hospital practice. Kelly gives the same figures as Osler. Smallman puts the death rate at 12 to 20 per cent. In six years, in the Paris hospitals, there were 960 deaths in 5,621 cases, or 17 per cent.

In regard to the choice of vaccines, Dr. Callison believes that all of the advantages must ever lie in stock vaccines, since it is ready to use as soon as a diagnosis is made; can be used by the general practitioner, and—most important of all—the typhoid culture from which it is prepared can be grown in the laboratory until it has lost all or the greater portion of its toxicity, and can be tested for antibody-forming qualities.

His dosage ranged from three injections of 250 millions to five injections, increasing 600 million to 1,000 million, and he recommends to those trying the vaccine treatment for the first time a first injection of 300 million as soon as a diagnosis is made, the injections given every third or fourth day, increasing 100 million each time until 1,000 million are given at a dose. While a too vigorous treatment would be unwise, the experience of this author leads him to believe that the danger line is far removed from the rational dosage. He gives two cases of patients much prostrated by the disease where dosage was pushed with good effect.

The vaccinations were given at various stages of the attack, and the importance of an early diagnosis and institution of vaccine treatment is emphasized. The value of the usual routine treatment is recognized, but is admittedly symptomatic. The rationale for vaccine treatment lies in the fact that it is an effort to follow or imitate Nature's method of bringing about a cure.

(To be concluded.)

In the mixed narcosis of chloroform, respiratory depression is apt to be absolute and persistent in those cases of abnormal innervation. Such cases are not necessarily dangerous, providing that artificial respiration be maintained till autonomic breathing returns. The administration of CO_2 during artificial respiration is the best treatment. The CO_2, of course, should be used so that some approximation to 5 per cent. be inspired intermittently.

THE AMERICAN COLLEGE OF SURGEONS.

An American College of Surgeons was organized at a meeting in Washington on May 5. Four hundred and fifty prominent surgeons met by invitation of a committee appointed by the Clinical Congress of Surgeons of North America at its New York meeting in November, 1912. This committee consisted of Edward Martin of Philadelphia, Emmet Rixford of San Francisco, John B. Murphy of Chicago, Rudolph Matas of New Orleans, Albert J. Ochsner of Chicago, Charles H. Mayo of Rochester, Minn., Frederic J. Cotton of Boston, George Emerson Brewer of New York City, J. M. T. Finney of Baltimore, W. W. Chipman of Montreal, George W. Crile of Cleveland and Franklin H. Martin of Chicago.

The invitations were extended after a carefully prepared campaign in which each large university city on the continent was visited by a member of the committee who met, in person, a group of selected men brought together by a committee of three in each locality. Of the five hundred men who were invited to the meeting in Washington, four hundred and fifty responded, representing all branches of surgery and surgical specialties. The surgeons responding to the invitation were designated the Founders of the College.

The Founders' meeting in Washington was called together by Dr. Edward Martin, and the call of the meeting was read by Franklin H. Martin. This call summarizes the work for which the Committee was authorized:

"First—It should formulate a minimum standard of requirements which should be possessed by any authorized graduate in medicine, who is allowed to perform independently surgical operations in general surgery or any of its specialties.

"Second—It should consider the desirability of listing the names of those men who desire to practice surgery and who come under the authorized requirements.

"Third—It should seek the means of legalizing under national, colonial, state or provincial laws, a distinct degree supplementing the medical degree, which shall be conferred upon physicians possessing the requirements recognized by this law as necessary to be possessed by operating surgeons.

"Fourth—It should seek co-operation with the medical schools of the continent which have the right to confer the degree of M. D., under the present recognized standards, and urge these colleges to confer a supplementary degree on each of its graduates who have, in addition to their medical course, fulfilled the necessary apprenticeship in surgical hospitals, operative laboratories and actual operative surgery.

"Fifth—It should authorize and popularize the use of this title by men upon whom it is conferred, and its use should especially be urged in all directories of physicians in order that the laity as well as medical men can distinguish between the men who have been authorized to practice surgery and those who have not.

"The net result of the Committee's efforts is that five hundred surgeons of all specialties, representing every large center of population, every important university city with a teaching faculty of medicine, every special and general society representing a specialty of surgery, all the important surgical clinics and hospitals, besides many independent surgeons from all portions of the North American continent have consented to become founders of the organization under contemplation, and of this five hundred fully four hundred and fifty are here at this hour ready to fulfill their obligation."

The Founders' Organization was then completed by the election of Edward Martin as Chairman and Franklin H. Martin as Secretary and the authorization of an order of business.

These by-laws were adopted:

I. **Name.** The name of the corporation is the College of Surgeons.

II. **Object.** The object of the College shall be to elevate the standard of surgery, to provide a method of granting fellowships in the organization and to formulate a plan which will indicate to the public and the profession that the surgeon possessing such a fellowship is especially qualified to practice surgery as a specialty.

III. **Organization.** The corporation is to be known as the College. The College shall consist of all members of the corporation, to be known as Fellows, and shall vest the general management of the corporation in a Board of Governors, and the Board of Governors shall in turn vest the details of the management in a board of trustees, to be known as the Board of Regents.

IV. **Administrative Plans.** 1. The Board of Governors shall consist of the five hundred surgeons invited by the Organization Committee to serve as founders of the College and who have signified their willingness to act in that capacity. The individuals of the first Board of Governors shall also be known as the founders of the College of Surgeons.

This original Board of Governors shall be divided into three classes to serve one, two and three years. At the annual meeting in 1914 and at each succeeding annual meeting, the Fellows of the College shall elect fifty surgeons to membership in the Board of Governors, each for a term of three years. Thirty of these are to be elected from a list of nominations consisting of two members each nominated by the following surgical societies and associations of North America:

American Surgical Association. Section on Surgery of the American Medical Association. Section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association. General Surgical Division of the Clinical Congress of Surgeons of North America. Division of Surgical Specialties of the Clinical Congress of Surgeons of North America. American Gynecological Society. Southern Surgical and Gynecological Association. Western Surgical Association. Section on Surgery of the Canadian Medical Association. American Association of Obstetricians and Gynecologists. American Orthopedic Association. American Association of Genito-Urinary Surgeons. American Laryngological Society. American Ophthalmological Society. American Otological Society.

Twenty members shall be elected at large to represent surgeons of North America not affiliated with the above societies or associations.

The Board of Regents shall consist of twelve surgeons, members of the Board of Governors, elected by the Governors, these to be divided into three classes whose terms of service shall expire in one, two and three years. Their successors shall be elected each for a term of three years. Not more than three of each class of four shall be elected from one country. The Board of Regents is increased to fifteen in number by three officers of the Corporation, the President, Treasurer and General Secretary. The two Vice-Presidents are ex-officio members of the Board. The Board of Regents is the administrative body of the corporation, corresponding to a board of trustees in other corporations.

V. **Fellowships.** The Fellows of the College shall be graduates in medicine, who are legalized to practice medicine in their states and provinces, who have made an application for fellowship, such application to be

endorsed by three Fellows of the College, one of whom shall be a member of the Board of Governors, and who meets the qualification requirements that shall, from time to time, be established by the Board of Regents, and who shall be elected to fellowship by the Board of Regents on recommendation of the Committee on Credentials.

All Fellows of the College shall be designated a Fellow of the College of Surgeons and shall be authorized and encouraged to use the letters F. C. S. after his names on professional cards, in professional directories and in scientific articles published in surgical literature.

VI. **Fees.** An initial fee of Twenty-five Dollars shall be required of each member of the College on his election to fellowship by the Board of Regents. The annual dues will be Five Dollars.

VII. **Directory.** The Board of Regents shall issue each year a directory containing the names and addresses of the Fellows of the College of Surgeons, arranged by states, provinces and colonies.

VIII. **Expulsion.** Any member of the College may be expelled for unprofessional or other conduct inconsistent with the rules and regulations of this Corporation by a majority vote of the Board of Regents.

IX. **Standing Committees.** The Board of Regents shall elect the following standing committees: 1. Credentials. 2. Legislation. 3. Graduate Schools and Hospitals.

The following officers were elected: President, J. M. T. Finney, Baltimore; First Vice-President, W. W. Chipman, Montreal; Second Vice-President, Rudolph Matas, New Orleans; Treasurer, A. J. Ochsner, Chicago; General Secretary, Franklin H. Martin, Chicago; Board of Regents, J. M. T. Finney, Maryland; A. J. Ochsner, Illinois; Franklin H. Martin, Illinois; George E. Brewer, New York; George E. Armstrong, Quebec; John B. Murphy, Illinois; Edward Martin, Pennsylvania; F. J. Cotton, Massachusetts; Herbert A. Bruce, Ontario; C. F. Stokes, Washington, D. C.; William D. Haggard, Tennessee; George W. Crile, Ohio; Robert E. McKechnie, British Columbia; Charles H. Mayo, Minnesota; Harry M. Sherman, California.

Much interest was manifested in the method to be pursued in the selection of the members of the Corporation and in the method of conferring fellowships. A series of resolutions covering this subject were offered by the Secretary and adopted.

The prospective Fellows are to be divided into four classes, A, B, C, and D. Classes A, B, and C are by resolution to be admitted without the formality of submitting to an examination under the following resolution:

"RESOLVED, That the A class shall consist of founders of the College.

"The B class shall consist of the members of the special surgical societies constituting the Congress of American Physicians and Surgeons and one hundred each, nominated by accredited committees, from the Surgical Section of the American Medical Association, from the section on Obstetrics, Gynecology and Abdominal Surgery of the American Medical Association, from the General Surgical Section of the Clinical Congress of Surgeons of North America, from the Division of Surgical Specialties of the Clinical Congress of Surgeons of North America, from the American Association of Obstetricians and Gynecologists, from the Surgical Section of the Canadian Medical Association, from the Southern Surgical and Gynecological Association and from the Western Surgical Association.

"The C class shall consist of surgeons of prominence of five years in the practice of surgery or a surgical specialty and who, in the opinion of the Committee on Credentials, are eligible for fellowship in the College without formal examination."

For all others, coming under Class D, the following resolution was passed:

"BE IT FURTHER RESOLVED, that the Board of Regents, through the Committee on Credentials, limit the admission of the Fellows to classes A, B, and C until the Board of Regents formulates a standard of requirements for class D and reports the recommendations back to the Board of Governors for approval at the meeting to be called by the Board of Regents in Chicago, November, 1913."

It will be spirit of this Association to open the fellowship to all competitors in surgery without favor. Scientific attainments, surgical ability, unquestioned moral character, measured by the College's standards, shall constitute the measure for fellowship.

There are many hundreds of surgeons on the continent, who are not included in classes A and B, who fall into the C class. Applications from these men will be welcome and their names will have the most careful consideration by the Committee on Credentials.

All applications for membership should be forwarded to the Secretary of the corporation. It would add to the ease of the work of the Committee on Credentials if references in the way of vouchers or recommendations from one or more well known surgeons accompany each application for fellowship.

The first convocation for the formal conferring of fellowships will occur in November, 1913, at a time and place that will be designated later. The first directory of Fellows will be distributed at that meeting. For that reason the applications for fellowships on the part of A, B, and C classes should be filed as promptly as possible in order to facilitate the correcting of lists for publication.

Pediatrics

The Biological Value of Infant Food.

Crookshank observes that it seems clear that the defective suckling power of many mothers is due, not merely to quantitative under-feeding, but to lack during pregnancy or after delivery, of biological galactagogues. It is not improbable that in a great deal even of the unboiled milk that is taken by mothers and by babies there is a hitherto unsuspected biological default. Orticoni and Lahache have recently called attention to the profound difference between the milk of a cow fed on natural food of good quality and that of one fed too much oil-cake composed largely of fermenting copra. And here is a double lesson. When we investigate the suitability of a cow's milk for a mother of a child, we must not only assay the proportion of fat and of proteid and estimate the bacteriological purity, but the biological value as well.

It does not seem unreasonable to suggest that the solution of the problem of infant feeding is not a question of elementary chemistry, is not one for the bacteriologists, or the hospital physician or health officer, but lies in an acuter realization of the importance of the biological factors at play; and in the biological qualities, not merely of the food given to mother or child, but in the biological values of the food on which the cows and other animals are nurtured that supply the human aliment.

Since for practical purposes the milk of a good cow is most like that of a human mother, biologically if not

chemically, it is to cow's milk that we must turn. But surely it should be axiomatic that any modification made of the milk supplied by the cow should involve as little interference as possible with what, until the chemists have made synthetic milk, we are bound to consider its vitalistic qualities.

And if some statistician will take the trouble to ascertain the relative fertility and maternal efficiency, from the lactiferous point of view, of mothers who were artificially fed themselves, he will find there is a definite correlation between artificial feeding in infancy and the function of various glands in later life.

Brady finds that the addition of malt and "polycarbohydrates" to the milk wherewith young babies are fed is highly advantageous, and gives him better results than any percentage method of feeding.

There are two malted foods that are pre-eminently useful; the first contains dried milk, with malt, some converted starch, and now, I believe, added citrates. The second is a member of a well-known series of foods, and, though professedly compounded for children over six months or so, has been found from experience to be perfectly suitable for much younger infants. It has not, however, the advantage possessed by the food first mentioned of being preparable at a pinch, and in time of illness or summer heat, without fresh cow's milk.

It is not a bad plan, too, for the first fortnight of life, to use the malted milk made with water alone in any case—a small teaspoonful of the powder to the ounce or more. Then when the meconium has been all cleared away and the body-cells have had ten days or so to accustom themselves to the malt and dried milk, fresh milk can be introduced gradually in increasing quantities, by weekly or fortnightly half-ounces, till, at the end of six months, the child is taking nearly or quite undiluted fresh cow's milk, with a not very greatly increased quantum of the added powder.

Crookshank also advises the use of gelatine. A tiny infant, in times of sickness, will benefit by a few spoonfuls of plain jelly made at home from packet gelatine; and for those a little older the jelly into which good broth sets may be used. Since both these forms of jelly melt at a low temperature, they easily slip down the throat. But milk-jelly, highly valuable as it undoubtedly is, does not melt, and has to be swallowed almost as a solid. Any child who can digest cow's milk can, of course, digest both junket and milk-jelly. Nor should either milk or buttermilk be forgotten. Both have their values, and practical acquaintance with the details of whey-making will serve the practitioner in good stead. Incidentally, it may be pointed out that milk which will not make good junket (and, of course, good whey) is of indifferent biological value, and to be prohibited, whatever its bacteriological purity or chemical composition.—(*Brit. Jour. of Child Dis.* No. XI., 1912.)

Modified Cow's Milk in Infant Feeding.

W. E. Fitch has made a study of modified cow's milk as a substitute food in infant feeding (*Pediatrics*, October, 1912), and brings out the comparative chemical composition of healthy woman's milk and cow's milk, the general availability of cow's milk as a substitute food, the physical and chemical differences between cow's milk and woman's milk and the modification of cow's milk with cereal decoctions.

He emphasizes the necessity of using fresh, wholesome milk from a healthy herd and points out the fact that the modification of cow's milk with a cereal is a mechanical one due to the gelatinized starch, which changes the hard curdling cow's milk into a soft curdling milk like human milk. The casein of cow's milk clots in hard lumpy masses in the infant stomach, the digestive enzymes cannot get at it, and any means whereby we can break up the clot and make it more flocculent, will increase the digestibility of the milk; and this can be done by the use of a properly prepared cereal decoction.

Not only do cereals modify the casein of cow's milk, but they, also, through their gelatinized starch, facilitate the digestion of fats, by emulsifying the fats after proteid digestion in the stomach. This is important because as Holt shows, the tendency to-day is to give a large percentage of fat, and the fats of cow's milk are more difficult to digest than the fats of human milk. With many infants it is often necessary to begin with an amount less than two per cent. of fat, and rarely is it necessary to exceed four per cent. There are numerous healthy infants who cannot even digest four per cent. of fat at any time, and many during the hot weather do better on a reduction to 3 or 3.5 per cent.

Theoretically, the child under six months, because of the deficiency of salivary and pancreatic secretions is said to be incapable of digesting starches. Practically this is not true. Nearly every fluid in the human economy has a diastatic ferment and as a matter of fact the very young infant does digest starch. We have seen too many babies successfully fed on arrow root to deny this fact. Finkelstein, of Berlin, is emphatic that very young children are capable of digesting starches, as are Jacobi, Epstein, Schmid, Minard, Keller, Newman, Heubner and others, while Kerley has conclusively shown by his experiments at the New York Infant Asylum, that there is no age limit for cooked starch feeding."

The addition of cereals to cow's milk is not only allowable, but is to be most warmly recommended, not only in older, but also in very young infants. The advantages of cereal modification, in addition to the readier digestion and gain in weight, are to be found in the finer subdivision of the casein in the stomach, in the emulsification of the fat, in the disappearance of soapy and dyspeptic stools, in the proteid-sparing power afforded by the cereals, and finally, in the general increment of growth.

This is the experience of the leading pediatrists of the world. Not every infant, by any means, can take cow's milk, or ass's milk or goat's milk; but starch foods may be added with benefit to cow's milk in the majority of cases, is established beyond all question, experimentally, chemically and clinically.

Resistance to Fatigue in Children.

Lesage and Collin found (*Arch. de mèd. des. enf.*, 1911) that children under two and a half, or exceptionally three years, presented an extraordinary resistance to fatigue, shown by their being able to hold up their arms for a long time without being tired. Thus in twenty-seven normal children aged from two to two and a half years the arms could be held in the same position from thirty to forty-five minutes. This absence of fatigue is due to an incomplete development of the nervous system, and is associated with other phenomena due to the same cause, such as Babinski's sign and retardation of sensibility to painful impressions.

De Schweinitz reported a case of a young woman who had intense headaches accompanied by scleral congestion and scotomata, relieved by treatment of sphenoidal disease.

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The Medical Times an Official Organ.

This journal, which is the official organ of the American Association of Clinical Research, has been designated to serve in the same capacity by the Society of Medical Jurisprudence of New York, which is under the presidency of Dr. Reynold Webb Wilcox. All papers read before those two well known organizations will appear in these pages.

A Glorious Awakening.

It is a matter of satisfaction to realize that after ages of the ostrich-like hiding of the public head in the sands of a half hypocritical, half prudish and altogether senseless modesty, we are coming upon better times in the discussion of hitherto tabooed subjects. For countless generations men have suffered from the diseases incident to sexual indiscretion. For the same period those diseases have been discussed only in the secresy of the chamber and then with bated breath.

In short, an evil which strikes at the very foundation of the individual and the nation has been shunted off as something which should not be mentioned in public. Syphilis and gonorrhea have hitherto never been mentioned in the public prints. The New York *Times*, the finest exemplar of clean, progressive, up-to-date journalism in this country, has, in discussing salvarsan on various occasions, referred to syphilis as a "certain blood disease"—a characterization both abominable and absurd. Gonorrhea, not being a "blood disease," has never been mentioned. Why? Because they are diseases of the generative organs and therefore taboo, the prudes tell us. Out upon such nonsense. If we have an epidemic of typhoid, the papers are filled with the details of the scourge. There may be 200 cases and 15 deaths. But a disease which has visited from 50 to 75 per cent. of the male inhabitants cannot be mentioned, on account of the manner in which it was contracted. Authorities say 15 per cent. of the people of the world, or practically one person in six, is syphilitic, but the disease can only be called a "certain blood disease" for some specious reason.

Fortunately for mankind, men are seeing a great light. Progress is not confined alone to politics. While most of the "reformers" in politics are reformers only that they may obtain the political preferment denied them by the parties of which they were once members, a reform is going on along sociological lines that is bearing real fruit. The national danger to which gonorrhea and syphilis are subjecting innocent persons is being recognized. Who would have imagined five years ago that a play like "Les Avaries," by Brieux, would be presented on an American stage? Yet under the name of "Damaged Goods" this play for several weeks daily crowded a large New York theatre, and the lesson it teaches was learned by thousands.

Now some American playwright should so graphically portray the horrors attendant upon gonorrhea that young men would consider well their steps. If our youth could be made to realize, through stage settings or otherwise, the seriousness of the gonorrheic scourge—the sterile marriage, the infected wife, who eventually has her health ruined, the blind or crippled baby, and the rest of the sordid picture—he might direct his energies into other channels.

It is, we repeat, a matter of satisfaction to realize that public sentiment is changing. The New York *Times*, for the first time in its honorable career, has this year published the word "syphilis" and has discussed certain phases of the disease. Thus is a precedent established which other papers will follow, for the *Times* treats medical topics, like most other subjects, in an admirable way, and its lead is followed by the daily press.

Men are awakening from their long sleep. Syphilis and gonorrhea are concrete entities and must be so recognized. They must be handled as Col. Gorgas handled yellow fever in Havana—*i. e.*, wiped out—and it is the duty of every medical man to assist.

Now that we are tackling these momentous questions, why should the play "Maternity," by Brieux, not be placed upon our stage and its great lesson be called to the attention of suffering women?

Unstudied Phases of Economic Pathology.

Professor Henry W. Farnum, of Yale, recently called attention to the failure of economists, sociologists and statisticians to include in their investigations the parasitic rich. The bearings upon eugenics of such investigation would be considerable, and the class concerned certainly merits scientific attention. G. K. Chesterton has ironically called attention to the fact that practically all our disciplinary and reformatory efforts have to do with the poor. Economic reactions in relation to the rich should be studied as well as similar reactions in relation to the poor. Poverty gives the more familiar pathological reactions, but wealth is also productive of distinct disabilities. The idle parasite preoccupied with monkey dinners and snake dances presents a problem just as truly as the delinquent of the slums. There are psychoses dependent upon the ill-used leisure of the ultra-rich just as there are mental deteriorations due to the strain of poverty. Parasitism and poverty engender alike special pathologies. Hereditary bearings are obvious. There is certainly no lack of specimens for study in the environs of Fifth avenue as well as on the East Side.

Hospital Abuses.

Those semi-charitable institutions that are exempted from taxation on the theory that they are caring for the sick poor too often betray the taxpayers. Partial betrayal is indubitable. The private sides of these hospitals are too often developed at the expense of the free quarters. It is all but impossible to get a poor patient into some of these plants. It is not only the urgent case that demands their care. If it is such bad business to take care of all classes of the sick poor that these hospitals cannot admit them, then the city should establish more of its own hospitals and proportionately withdraw its support from the private institutions. The New York *Sun* further proposes on the part of the city the establishment of its own semi-charitable hospitals in which those not destitute could obtain proper treatment by a small charge in accordance with their incomes, with the proviso that such cases permit themselves to be utilized for instruction. Such patients would thus be offered an opportunity to maintain their self-respect without destruction of all their resources by paying a certain percentage of their incomes for treatment and nursing. The *Sun* quotes with apparent approval the plan of the Syndicat Médical de Paris in respect to patients able to pay but pretending poverty. A written statement of his financial inability is exacted from each patient who claims to be unable to pay, when, if investigation disclose misrepresentation, prosecution and punishment follow in the courts.

We think the plan recently devised by the Commissioners of Accounts of New York adopted by the Board of Estimate, endorsed by the Mayor, and put in operation by the Commissioner of Charities, an excellent one. Every patient unable to pay, or able to pay only part of the cost of hospital maintenance, is reported to the Department of Public Charities within twenty-four hours after admission, whereupon examiners of the Department are sent to the homes and employers of such patients and a careful inquiry instituted as to the actual economic status of the reported cases. All sources of income are inquired into. Agreements to pay part are secured from some responsible member of the family if possible, and these payments are made at the office of the Department. The city pays the hospital in full for the patients unable to pay, and for those from whom the hospital has failed to collect but who have paid the Department something less than the full board. Whatever the hospital collects itself is deducted by it from its monthly bills rendered to the Department. There are *per capita per diem* rates for different classes of patients. It would seem to us that at last a scientific scheme has been elaborated calculated to reduce this phase of charity abuse to a minimum, and the profession has to thank the Commissioners of Accounts for this useful service to the taxpayers and to itself.

The Mental Hygiene Crusade.

It is to be hoped that the movement looking to the prevention of insanity will not be marked by the assumption of unsound doctrines, as has been the campaign against tuberculosis. Both physicians and the general public in all civilized countries are becoming more and more interested in practical mental hygiene and in everything that bears upon it—eugenics, euthenics, the control of syphilis, etc. Upon what basis ought a campaign of education to rest? In the case of tuberculosis a vital error has been sunk into the minds of the people, namely, that most human beings are free from tuberculosis and that prophylaxis consists mainly in the care of sputum and the segregation of the clinically active cases, to the end that those free from the disease shall not be infected by the diseased. We know now that practically every member of the race is infected from a very early age and that while the care of the sputum of infected individuals is most important the chief thing to be emphasized is the maintenance of resisting power in those who, though infected, have managed to hold the invader at bay. May we not learn something from our tuberculosis experience that will be of aid to us in our campaign against insanity?

We think that the remarks of Professor Bleuler, of Switzerland, at the recent opening of the Henry Phipps Psychiatric Clinic at Johns Hopkins Hospital, has supplied us with an idea that points to the basis upon which a campaign of education ought to rest. All persons, said the professor, live on the border of insanity and are liable to become mentally unbalanced. He went even further and declared that none of us is very far from the insane and that we all have irrational thoughts controlled by logical reasoning. It is our logic that keeps the autistic or insane thinking in the background. Any deviation from reality becomes autistic. We all have our dreams, unreal and impossible, even in our waking moments. "Each of us," says the Swiss professor, "has his fairy tale when alone. We hide it from strangers. We like to believe that we are rich or good looking or of great eminence. The imprisoned fairy guides our taste, shapes our clothes and makes us sign our names with a flourish." So it is not the poet alone who escapes from the world of actuality into the land of Make Believe. We are all dreamers, while pretending to be very solemn, unimaginative persons, hard-headed, unromantic grave. We are all poets, in a sense. The most successful man is merely one whose vision has been clearer than the visions of others, whose "illusion" as to himself arrived at the coveted goal is more intense than the illusions of his fellows.

In a paper recently published in one of our leading journals by an eminent psychiatrist the writer was struck by the classification as abnormal of some of the emotional, volitional and intellectual traits displayed at times by practically all of us. Thus speculative revery, sensitiveness, intensity in the undertaking of things, nervousness, amenability to suggestion, bad temper and wavering will power are cited among more serious counts as evidences of psychic constitutional inferiority. Nor does the psychiatrist qualify his judgment at all sharply. He does not reveal that he has any well-defined realization that we may all indulge in speculative revery much of our time, and that we do so indulge, that we are all sensitive, if we are highly organized and highly intelligent and imaginative, about the finer things and relations of life, that we do grow intense over laudable tasks, that we become nervous over things that may not ruffle uncouth peasants, that we are amenable, and very amenable, to many kinds of suggestion, that we do have our attacks of temper, even if we are alienists, and that we are very frequently unable to call our will power into action in the midst of the perplexing problems of our highly complex civilized life.

Sometimes we wonder just what our psychiatrists expect of us. What would the "standardized" man that the psychiatrist might be supposed to postulate be like? We appreciate how difficult it is to describe the characteristics of the prospective lunatic in approved text-book fashion without setting down a lot of traits that strike the medical "man in the street" as not being essentially abnormal. The differences between the normal and abnormal are often so subtle that human language fails to denote them unerringly. Nevertheless we make bold to declare it to be our conviction that the

average alienist or psychiatrist lacks something in his perspective, and is oftentimes not very human in his judgments. What might seem to the ordinary medical observer a not unduly prolonged period of grief following the demise of a much loved relative or friend your academic alienist too frequently regards with suspicion. As to that very important question—feeble-mindedness—even here there should be tempered and elastic judgment. The dullness as boys of Edward Gibbon, Goldsmith and Sheridan would to-day, were they pupils in a public school subject to the visitation of our experts, probably result in "special class' assignments. Fanatical eugenists, endowed with power but lacking in perspective, would probably not be very kindly disposed toward duplicates of such a type as Rousseau, if we can imagine that such a type will ever be duplicated. Indeed we can hardly speak of Rousseau as a type. He was a wondrous intellectual entity, though to the eugenist his "degeneracy" would overshadow his gifts. We shudder to think of the fate that might be meted out by the fanatical eugenist lacking a sense of humor to a Colonel Mulberry Sellers, or to a Micawber, a Dick Swiveller or an Alfred Jingle. Of course we are one with those who would deal drastically with obviously gross unfitness.

Well, to come back to our main thesis, we should like to say that it is our conviction that our mental hygiene crusade ought not to be based upon any arrogant and arbitrary assumption that most people are balanced with any great fixity and that their mental stability is rigid and unalterable. The truth is that most people are not very fixedly balanced and it does not mean inferiority either. A man wholly sane at all times in his life can only be postulated by a library psychiatrist. Moreover, there are too many lovable "half-vagabonds, half-scholars," like the one who interested the young Lincoln in Burns and Shakespeare, for us to adopt any ruthless attitude in these matters. Perhaps in the eyes of the Lord the vagabond who sings:

'E's a bit of a vagabond, same as me,
'E's brother to beggars, an' friend to a flea;
'E's a son of the 'ighroad, the old sea-and-sky road,
The road that leads out to the far an' the free!
'Ey say it's a wrong road—God knows it's a long road—
But Lor', it's a song-road to Laddie an' me.*

is as good a human asset as a stern psychiatrist. And though it may be rank heresy to say so, it is our belief that one degenerate like Rousseau is worth all the fanatical eugenists who are now filling the air with their advice.

Friedmann.

Some of our readers have commented on our lack of enthusiasm over Friedmann. We have purposely refrained from comment, for the man impressed us as an unethical commercialist long before he left Europe. His coming to this country, uninvited by his American confreres, but widely heralded through the machinations of a skillful press agent, and his subsequent unprofessional conduct, warrant every medical journal in overlooking him.

Friedmann's actions have demonstrated him to be quite ignorant of medical amenities, and a person who, thoroughly discredited in his own country, whence most of the great discoveries in medicine have originated, seeks utopian America, where gullibility and dollars are believed to predominate. From authoritative reports, the turtle serum appears to be lacking in the qualities its promoter so loudly claims for it.

Is there an analogy between Dr. Friedmann and Dr. Cook?

* F. D. B., in *Life*.

Medical Editorial Table

Intravenous Injection of Neosalvarsan in Concentrated Solution.

Recent experiences have shown the advisability, in the intravenous administration of salvarsan, of employing freshly distilled and sterilized water for the preparation of the solutions to be injected. Another necessary precaution has been that of using normal saline solution, in order to avoid destruction of corpuscles by laking when the fluid is introduced. In view of the fact that the sodium chloride used and the lead, lime, and other bodies that may be present in the distilled water itself have been considered responsible for some of the untoward phenomena closely following salvarsan (or neosalvarsan) injections, Revaut had adopted the plan of administering neosalvarsan in the smallest possible quantity of distilled water, thus doing away with both the sodium chloride and, in large measures, the harmful constituents of distilled water.

In a recent communication on this subject Revaut (*Presse medicale*, April 2, 1913) states that he has recently been injecting as much as 0.9 gramme of neosalvarsan dissolved in only eight or ten cubic centimeters of distilled water. With this procedure, the neosalvarsan itself supplies the required isotonicity with the blood. Distilled water prepared several weeks before and kept in ampoules of the highest quality glass can be used directly without causing any systemic reaction. The solution is prepared after the constricting band has been applied to the patient's arm and the skin cleansed with alcohol. The drug is merely dropped into the water, and the solution drawn up into the glass syringe through a special glass tube containing a small wad of cotton, for purposes of filtration.

The needle is then adapted to the syringe, air driven out, and the injection at once given. All rubber tubing is thus eliminated and a more strict asepsis rendered possible. The whole procedure of preparation and injection occupies only two minutes. The author has given 420 such injections without the least untoward result.—(*New York Medical Journal*, May 3, 1913.)

Army Surgery in the Balkan Campaign.

We have had some interesting reports on the military surgery of the recent warfare by land and sea in Europe. Exner was in charge of the reserve hospital at Sofia, whither the wounded were conveyed in six-day marches in ox carts. They reached their destination exhausted and poorly nursed. There was an unusually large number of infected bone fractures, of which the milder types healed, as a rule, promptly under immobilization. Exner supervised the treatment of 1,200 soldiers. Of twelve cases of tetanus but two survived. The victims might have been saved by superior transportation. There was not as much difference in the morbidity of infantry and artillery wounds as one usually expects, which is explained by the supposition that the latter were not as dangerous as usual. The worth of the conservative treatment of these wounds was borne out over and over. This holds good chiefly for infected wounds in which prompt opening and drainage were practised. There were but few cases of bullet extraction. There were over 80 cases of shot wounds of the lungs, which were not infected and but few were disturbed. Injury to both lungs gave a bad prognosis. In general the surgical resources of the Balkan allies were much below the European standard.—(*Medical Record*, March 15, 1913.)

The Proposed American College of Surgeons.

There is no question in the minds of all thinking men, both medical and lay, that the time has come when the word surgeon should carry with it some guarantee of the efficiency of the individual making use of the appellation. At present any physician can call himself a surgeon, and while the members of the medical profession can ordinarily estimate the ability of any individual in this line of work, the laity has no means of distinguishing between a real and a make-believe surgeon.

It may be assumed without fear of contradiction that the practice of surgery carries with it far greater possibility of doing harm to the patient than does the regular practice of medicine, and since this is true some method ought to be devised whereby incompetent men should be excluded from doing operative work.

In view of the fact that it seems impossible for the national government to exercise any control over the qualifications of the practitioners of medicine in this country, and because of the fact that State control represents such diverse opinions, we are almost forced to rely upon some voluntary movement along this line.

The beneficial effects of such a voluntary movement without the slightest semblance of legal authority has been well exemplified by the Council on Medical Education of the American Medical Association. No one can dispute or minimize the influence of this movement, and yet it has not had one scintilla of legal authority to compel or punish.

One can readily pick many flaws in the scheme as presented, but the real difficulties will begin when an attempt is made to define the qualifications which will admit a surgeon to fellowship in the organization.

"Scientific attainments measured by the corporation's standard and backed by unquestioned moral character should constitute the requirements of a fellowship" is the language used in the summary of views. In Section 7 we read "The principal object of the college should be to elevate the standards of surgery by utilizing to its maximum the machinery of the existing teaching institutions in order that our prospective fellows can obtain training without undue hardship." These two quotations apparently express the main ideas upon which the proposed college is to be based. No one can dispute the desirability of attaining these ideals, but the working out of the details whereby this result can be accomplished will call for a high order of executive ability and a very nice degree of judgment.—(*Lancet-Clinic*, May 10, 1913.)

Malaria and Material Welfare.

It would seem that those diseases which have impeded commerce have been the first to disappear; for example, typhus, smallpox, yellow fever and the tropical malarias and dysenteries have been brought nearly to the vanishing point. Money considerations have, seemingly, more than altruism, advanced sanitary science. Health measures wait upon business undertakings. The sanitarian's authority waxes great in the community which grasps the idea that progress in hygiene is essential to assured and profitable business development. International quarantines help business. If great commercial interests were involved in the activities of the tubercle bacillus, consumption might already have been much more diminished. Typhoid fever will become extinct as soon as our people grasp the meaning of its economic destructiveness. Malaria has been a potent factor in hampering the agricultural and industrial development of this country, particularly in the South. The Middle West has suffered much, and even the Eastern States have lost in productive capacity through the ravages of Anopheles. Comparatively inexpensive and perfectly effective drainage measures would reclaim millions of acres of land of inestimable richness, as for example the Delta region of the Mississippi where the farming land is second only to that in the Nile valley. When the Delta is made malaria free "it will be the richest and most populous region in the United States." There will have to grow up a general popular appreciation of the industrial losses caused primarily by Anopheles. Large scale drainage measures by the general government have been planned, and New Jersey, New York and other States are beginning to work; communities throughout the country, by their boards of health, are showing signs of activity, and anti-malaria literature is educating the people. All this interest should be intensified, the importance of the work should be emphasized, and universal relief from malaria should follow as the day the night.—(*Boston Medical and Surgical Journal*, March 13, 1913.)

Possible Contraindications for Antityphoid Vaccines.

There has been some hesitation about adopting typhoid immunization, and this would appear to have been wise. Spooner finds that typhoid vaccine has had the effect of activating non-typhoidal disease which was latent or chronic at the time of the injection. Combe and Lewis also advise considerable care to exclude other diseases before vaccination for typhoid is undertaken. It ought not to be performed except in perfectly healthy subjects. Sore throat, pains in the limbs, influenza, and pulmonary affections, acute gonorrhea and primary and secondary syphilis exclude its use. Chronic affections are more important as possible contraindications. Special attention should be paid to the suspected tuberculous individual. Typhoid antigen produces the same effect as tuberculin on the temperature of tuberculous subjects. An abnormal reaction in a subject who does not present any obvious trace of this disease, in the absence of a previous attack of typhoid, suggests latent tuberculosis. In cases with a history of past tuberculosis, though apparently cured, and in which the general health is satisfactory, antityphoid vaccination, if required, should be given cautiously. If marked constitutional reaction follow it is preferable to discontinue the vaccination. In the case of malaria vaccination should be done between attacks, fifteen grains of muriate of quinine being given with each injection. Otherwise it will bring on an attack. Cachexia from any cause, organic heart or kidney disease, diabetes and mucous colitis are held as contraindications. It should not be given to females during the menses, nor to exhausted, fatigued subjects. Combe and Lewis believe it to be absolutely unsafe in civil life.—(*Interstate Medical Journal*, April, 1913.)

Education in Sex Hygiene and Prophylaxis.

There is one point of attack in combating the spread of venereal disease which is justly regarded by many experienced workers as the most vital and strategic, and this is the education of the young. There has been an upheaval in pedagogic and social sentiment in the last few years regarding the question of sex-teaching in home, school and college. Conventional prejudice against such teaching is giving way rapidly, and results are already beginning to appear. Educators are coming to believe that these subjects have a rational and vital place in the educational system. Members of our profession have an inherent and unique responsibility in furthering this educational work, and every physician

can participate either privately or publicly. Modern social sentiment demands a new style of treatment and a new point of view in considering venereal disease, and it behooves the physician to be a leader in this great work. The community and state assume immense burdens in the care of victims of such conditions as deaf-mutism, mental defectiveness, tabes, general paralysis, pelvic infections, and blindness, yet the prevention of a large percentage of these conditions by prevention of syphilis and gonorrhea receives but meager attention. If bubonic plague had but a fractional percentage of the incidence of these diseases all hands would be joined to drive it out. Cholera in a civilized country to-day is no such social and national menace as venereal disease. We appropriate large sums to fight certain diseases and we quarantine against these diseases rigidly, yet the venereal diseases are as dangerous as some of these, and more dangerous than others. The essence of preventive medicine is education, and physicians, by virtue of their training, experience and ideals, of right ought to be leaders and teachers. Their responsibilities are now recognized in the important fields of the prevention of venereal disease and education in the hygiene of sex. There is a marked awakening on the part of the physicians themselves to their obligations as leaders and teachers in the science of keeping well.—(*J. A. M. A.*, April 19, 1913.)

The Decline in Prescribing.

One reason why the druggists receive few prescriptions for galenical preparations is that physicians do not know how to formulate prescriptions, being ignorant of the exact therapeutic action of drugs, owing to defects in their educational training. This is the conclusion of Dr. Henry Bates, president of the Pennsylvania State Examining Board, whose executive experience in the examination of candidates for registration as physicians entitles him to speak with authority. His conclusion commands grave consideration. Doctors resort to ready made mixtures because of ignorance. When a physician prescribes a drug he rarely knows exactly how it acts, but notes only that the patient gets better or worse. This is a very severe, but probably just, arraignment of the present day curriculum. The teaching of materia medica would seem to be overshadowed by the increased attention paid to pathology, diagnosis and other branches. In many schools the tendency toward drugless therapy is reflected in the relegation of the study of materia medica to a less important plane than it is entitled to, although pharmacology has developed a degree of exactitude in the study of therapeutic action not dreamed of a quarter of a century ago. Then this development has been of the laboratory type, and often the powers of clinical observation have not been cultivated in the student. Dr. Beates' criticism ought to prove stimulating to certain schools. A study of the curriculum approved by the Association of American Medical Colleges would seem to show an inadequate proportion of time devoted to the study of treatment.—(*New York Medical Journal*, March 8, 1913.

Sanitary surveys for malaria in infected regions should be carried out, and systematic blood-search of the inhabitants, especially the children, of communities reputed to be malarious, with the study and classification of the mosquitoes of the localities, should be part of the work undertaken in the campaign. Having obtained the desired data, efforts to cure the infected populace and to suppress the malaria-carrying mosquitoes should naturally follow.

Tuberculosis

Tuberculosis Treatment.

M. W. McDuffie, of New York, makes a preliminary report on the results of twenty-six different methods of treatment in advanced tuberculosis at the Metropolitan Hospital, 5,000 cases having been subjected to these treatments during the past year. In these treatments there were employed mercury succinimide, mercury bichloride, mercury biniodide, arsenic trioxide, salvarsan, Fowler's solution of arsenic by mouth, mineralization treatment, oils, Sherman's vaccines (letter P), combined bacterial vaccines (Van Cott), Schafer's vaccine or filtrate, Schafer's tuberculosis vaccine or filtrate, Dr. Cocheu's vaccine or filtrate, Dr. Duncan's autotherapy filtrate, tuberculin by mouth, tuberculin injections, antistreptococcus serum, quinine, baptisia, formaldehyde solution, salicylic acid mixture, salicin, sodium salicylate, guaiacol and vanadium. By far the most encouraging results were obtained from a mixture containing salicylic acid sodium salicylate 37.5 per cent., guaiacol 12.5 per cent., and glycerin 50 per cent. This mixture was used in fifty grain doses in 220 Cc. of sterile water. Within a few seconds after injection a peculiar taste is noticed and the face and chest show a flush; dizziness is experienced and perspiration often begins before the injection is completed. The patient is kept in bed from four to twelve hours after this injection, when with sweating comes amelioration of all symptoms. Frequently there will be an appetite for breakfast the next morning, which is the exception in many of these cases. Dyspnea is very much relieved. Occasionally vomiting will follow. There is a marked change for the better in the appearance of the patient. All the symptoms improve. It is a most gratifying treatment. The Metropolitan's death rate has fallen from sixty-two per cent. to thirty-one per cent. since its institution. It is the quickest and most satisfactory treatment for secondary septicemic and last stage cases. Improvement is noted in temperature, sputum, weight, blood analysis, pulse and respiration. Frequently the temperature is reduced to normal after four to six injections. Experiments at the hospital have shown that guaiacol alone, while exceedingly valuable and very similar in action to the mixture, does not act so well. As for the sodium salicylate, when given alone, intravenously, in the strength of 37.5 grains to 220 Cc. of sterile water, the most violent respiratory symptoms develop. For some reason the mixture (it is only a mixture, no chemical reactions taking place) gives peculiarly gratifying results. It appears to be a specific for the secondary infections.—(*New York Medical Journal*, March 15, 1913.)

Induced Pneumothorax in the Treatment of Pulmonary Disease.

Louis Hamman and Martin F. Sloan review the literature of this comparatively new and promising procedure. Nitrogen is injected and collapse of the diseased lung induced. The pathological anatomy of the collapsed lung is as follows:

1. The most striking change is the extreme fibrous tissue formation. This has been noted in every instance and occurs in a degree never observed under other conditions. Bronchi and alveoli may be compressed, and the scattered alveoli imbedded in the connective tissue give the organ the appearance of a gland. The overgrowth of connective tissue is more marked in the situations where compression has been complete, than in

portions of the lung that have been prevented from collapsing adhesions. A similar tendency to fibrous tissue formation is not observed in the opposite lung.

2. While evidence of advancing disease may be found in the opposite lung, the collapsed lung shows no fresh lesions. Old caseous areas may be seen surrounded by dense fibrous tissue, but no recent tuberculous infiltration.

3. The epithelium of the alveoli is transformed and becomes cuboidal or columnar in type.

4. The lymphatics are markedly dilated and pigment richly deposited.

Bruns has shown that the amount of blood in the collapsed lung decreases in a few hours after the pneumothorax forms and becomes less and less as the collapse proceeds. Histologically the alveolar walls, although pressed together, display no tendency to adhere even where there has been long standing atelectasis. The epithelium remains intact and the lungs may, at any time, be successfully reinflated. In the region of the large vessels and bronchi there is definite proliferation of connective tissue. The right side of the heart hypertrophies, consequent upon the intereference with pulmonary circulation, although the diminished suction action of the lungs and diaphragm may play a part in its production.

Artificial pneumothorax induces functional rest, long accepted as an important condition for the recovery of inflamed tissues. We know what brilliant results sometimes attend upon the enforcement of absolute rest in tuberculous infections other than pulmonary.

The authors conclusions are as follows:

1. Induced pneumothorax is a harmless procedure and the operation, carefully performed, is without danger.

2. In 3 out of 20 cases it was impossible to produce any pulmonary collapse owing to general pleural adhesions.

3. Of 16 cases in which pneumothorax was successfully produced in but 7 was the pneumothorax complete.

4. Of 9 cases with induced pneumothorax existing for four months or longer 4 have developed pleurisy with effusion.

5. The pneumothorax has, in most instances, an immediate and striking influence upon the cough and expectoration. Tubercle bacill may disappear from the sputum.

6. Constitutional symptoms abate more slowly. In most instances there is at first a loss in weight followed by a gradual rise.

7. The total collapse of one lung causes surprisingly little inconvenience. Usually there is but slight dyspnea on exertion. Many of the patients with an induced pneumothorax assist actively in the work about the sanatorium.

8. The procedure is of great value in the treatment of pulmonary hemorrhage.

9. While induced pneumothorax will never become a routine method for the treatment of pulmonary tuberculosis, still in selected cases it offers a prospect of temporary and permanent relief when the usual methods of treatment have been unsuccessfully tried. Quiescent lesions in one lung with acute recrudescence in the other are the most favorable for the treatment. Its use need by no means be limited to strictly unilateral lesions, but when there is advanced disease of both lungs little benefit can be expected. It would seem advisable not to withhold the treatment until the patient is hopelessly advanced, but to apply it judiciously to suitable moderately advanced patients in whom the disease tends to progress in spite of appropriate treatment.—(*John Hopkins Hospital Bulletin*, February, 1913.)

Persistent Mouth Breathing Following Adenoidectomies.

Irving Sobotky, of Boston, asks why there are so many failures after adenectomies and what can be done to facilitate nasal breathing. We promise nasal respiration and six months after the operation the patient returns to us unrelieved. The difficulty often lies in abnormal conditions within the nasal cavities. It is obvious then that simply removing adenoid growths, however completely will not cure mouth breathing when there is nasal obstruction from any cause. Sobotky emphasizes the following points:

1. For the cure of persistent mouth breathing the nasal breathing exercises have not proven efficient.

2. An operative treatment of the nasal condition is indicated. Such treatment must be appropriate for the age of the patient.

3. Patients should have the adenoid growth removed before the typical high palatal arch is formed.

4. If this high arch is formed the treatment should be dental; such as spreading the arch and regulating the teeth.

5. Cutting a slice of mucus membrane from the enlarged lower turbinates as an aid to nasal respiration has given good results.

6. A sub-mucous resection should not be done in children under sixteen.

7. Electrolysis, using the bi-polar method, is effective in reducing the enlarged turbinates but is not suited for children.—(*Boston Medical and Surgical Journal*, February 13, 1913.)

Seasonable Variation of the Symptomatology of Pulmonary Tuberculosis.

N. B. Burns, of North Wilmington, Mass., assistant superintendent of the North Reading State Sanatorium, summarizes his observations in respect to seasonal variations of the symptomatology of pulmonary tuberculosis as follows:

Phthisical patients are apt to lose rapidly in weight and general condition in May, June and the first two weeks in July, which season constitutes an unfavorable and critical period.

Phthisical patients make an extraordinary recovery in weight and general condition in the month of August, which is a surprisingly favorable time of the year.

August, September, January and February are the most propitious months for obtaining successful results in treating pulmonary tuberculosis.

Forced feeding in the unfavorable season seems to have availed very little in the cases studied at North Reading.—(*Boston Medical and Surgical Journal*, March 20, 1913.)

Cutaneous Reaction to Tuberculin in Childhood.

Lapage, of Manchester Children's Hospital, believes thoroughly in the use of tuberculin in children and emphatically states that all tubercular cases give a reaction. He finds the cutaneous method more suitable for practical purposes, even though the subcutaneous methods gives the highest percentage of results. He summarizes his experimental investigations as follows:

The results of the clinical examination and the tuberculin test are confirmatory of one another, the reaction occurring far more frequently in those showing symptoms pointing to tuberculous infection.

The *x*-ray examination and the cutaneous tuberculin

test correspond fairly closely if their results are properly interpreted.

A reaction indicates that the subject has been infected with tuberculosis and does not mean that the disease is progressive or even active.

We have at present no method of performing the test to afford us a means of distinguishing between active and passive disease.

A marked reaction or a reaction in a healthy person may be of good import and need not bear a sinister interpretation.

Slight reactions seem to occur more often in cases negative or only possible clinically.

A negative result may follow the test in children infected with tuberculosis: (1) if the disease is advanced; (2) if there is cachexia; (3) in very acute disease; (4) in mixed infections or cases complicated by acute disease.

A single negative test does not exclude tuberculous infection, repetition of the test increasing the percentage of positive results considerably (28 per cent.).

Even a negative result on repetition of the test does not always exclude infection, because some cases are only positive on the third application and others, positive to *x*-ray examination, but neither advanced nor cachectic in nature do not react to repeated tests. Therefore, judged by the *x*-ray examination, the cutaneous tuberculin test cannot be regarded as absolutely reliable in excluding tuberculous infection. There is greater difficulty in diagnosing occult tuberculosis after the age of two years. In indicating tuberculous illness the test is of greatest value in young children.—(*Brit. Jour. Child. Dis.*, December, 1912.)

Total Deaths from Tuberculosis (All Forms).

The total number of deaths from all forms of tuberculosis in the registration area during 1911 was 94,205, the death rate being 158.9 per 100,000—slightly lower than the rates for the preceding years, 160.3 and 160.8 for 1910 and 1909, respectively. The rates for the past three years are considerably lower than the annual averages for the quinqennial periods 1901 to 1905, 192.6; and 1906 to 1910, 168.7. There would appear to be a marked reduction in the death rate from this disease, although the rate for the past three years has remained practically unchanged.

The highest death rates from all forms of tuberculosis shown for the States in the registration area were those of Kentucky, 229.3; Colorado, 218; California, 206.8; Maryland, 203.3; and the lowest rates were those of Utah, 46.8; Michigan, 96; Wisconsin, 103.8; Washington, 106.7; and Montana, 107.1. The high death rate for the group of North Carolina municipalities, 256.8 per 100,000, was due to urban conditions and the large colored population.

The cities of 100,000 population and over in 1910 having the highest death rates from tuberculosis of all forms were Denver, 292.7; Los Angeles, 277.5; Albany, 269.4; Cincinnati, 265.3; and New Orleans, 260.5; while those with the lowest rates were Milwaukee, 106.5; Portland, Ore., 106.8; Spokane, 109.4; Grand Rapids, 110.3; and Scranton, 112.7.

Prof. Kuemmell divides renal tuberculosis pathologically into five classes. First, a part of a general miliary tuberculosis. Second, the tubercular infection is confined to one or more papillæ which are usually ulcerated and the site of hemorrhage. Third, disseminated miliary tubercles confined to one kidney. Fourth, large and small caseous foci scattered throughout the organ. Fifth, renal tuberculosis with mixed infection.

Public Health

NEW YORK'S NEW HEALTH LAW.

Among the most important of the provisions of the new law recently passed by the New York Legislature are:

1. A public health council is created, consisting of the Commissioner of Health and six members appointed by the Governor, of whom at least three shall be physicians and one a sanitary expert. This council is to enact and from time to time amend a sanitary code to apply to all portions of the State except the City of New York, but each city and town may enact additional regulations not inconsistent with the State code. The council has no executive, administrative or appointive powers or duties.

2. Three new divisions, each to be in charge of a director, are added to the Department of Health (Child Hygiene, Public Health Nursing and Tuberculosis) and six divisions already established in the department are written into the statute (Administration, Sanitary Engineering, Laboratories and Research, Communicable Disease, Vital Statistics, Publicity and Education).

3. The Commissioner of Health is specifically charged with the enforcement of the public health law and the sanitary code, and shall exercise general supervision over local health authorities.

4. The Commissioner of Health must divide the State from time to time into twenty or more sanitary districts and shall appoint for each district a sanitary supervisor who must be a physician.

5. Besides supervising the work of each local health officer within his district, aiding him in the performance of his duties and acting as representative of the State Commissioner of Health and under the direction of the Commissioner securing the enforcement within his district of the provisions of the public health law and the sanitary code, the district sanitary supervisors are specifically charged with the following duties:

The annual sanitary survey of their districts.

Organization of district conferences of health officers.

Adjustment of questions of jurisdiction arising between local health officers.

The study of causes of excessive mortality from any disease.

Promotion of the registration of births and deaths.

Inspection of labor camps and enforcement of the sanitary code.

Inspection of Indian reservations.

Securing the co-operation of physicians in the improvement of public health.

Promotion of educational campaigns on public health.

6. The Commissioner of Health is given the authority to employ public health nurses and may assign them from time to time to sanitary districts to assist the district supervisors and local health officers in the control of contagious and infectious diseases.

7. The Commissioner of Health is directed to submit to city authorities recommendations for the establishment of hospitals for contagious diseases, and shall inspect all such hospitals.

8. The powers and duties of town and village boards of health are transferred to town boards and village boards of trustees. If any town board or village board of trustees fails to appoint a health officer, the Commissioner of Health may exercise the powers of a health officer in that locality, the expense incurred by the Commissioner being a charge upon the locality.

9. The Commissioner is given power to investigate the enforcement of the tenement house laws in all cities, instead of only cities of the first class, as in the old law.

10. The law insures to every health officer in the State a respectable compensation for his services. Health officers of cities, towns and villages having a population of 8,000 or less shall receive not less than 10 cents per annum per inhabitant. Health officers of cities, towns and villages of more than 8,000 population shall be paid not less than $800 per annum. The health officer shall also be paid additional compensation for extra services in the case of epidemics, which compensation "shall be equal to the charges for consultation service in the locality."

11. Practically the only opposition to the bill in the Assembly was based on the increase in the pay of health officers. The health officers, however, are required specifically to perform the following duties, most of which were not prescribed before and which were seldom if ever performed by health officers for the ridiculously low salaries received by most of them:

Annual sanitary survey and a continuous supervision over the territory in their jurisdictions.

Medical examination of every school child, except in the schools in which authorities make other provision for the medical examination of the pupils.

Sanitary inspection of all school buildings and places of public assemblage, reporting to those responsible.

Educational campaigns on the nature and prevention of prevalent disease and the preservation and improvement of health.

Securing prompt and full reports by physicians of communicable diseases and full registration of births and deaths.

Enforcement of the sanitary code and the public health law within their jurisdiction.

Attendance at the annual conference of sanitary officers called by the State Department of Health and attendance at local conference within their sanitary districts.

12. Health officers are given the power to employ any number of public health nurses they may deem necessary within the limits of the appropriation made therefor by the city, town or village.

13. The tuberculosis registration law was amended to permit the reporting of cases of tuberculosis by telephone or in person as well as in writing, and the form for the report is simplified to make the reporting of such cases easier. Any physician may now report to the local health officer simply the name and address of any person coming under his observation who appears to be suffering from tuberculosis. The health officer is required to take such steps in the handling of such cases as are required by the sanitary code.

14. Health officers are given authority to cause all reported cases of tuberculosis within their jurisdiction to be visited by a public health nurse; however, when the physician reporting the case elects to carry into effect the procedures and precautions required by the public health law and the sanitary code, the nurse shall act under the direction and supervision of the attending physician.

15. Each registrar of vital statistics is required promptly to report to the health officer the name and address of every person reported to him as having died from tuberculosis, and the health officer must ascertain whether such person has previously been reported by the physician signing the death certificate as having tuberculosis.

16. If it is found repeatedly that any physician has failed to report cases of tuberculosis, the health officer shall report such violations to the local health board, who shall take the steps necessary to enforce the penalties for violation of the tuberculosis law, such violation being a misdemeanor.

17. Health authorities are given control over persistently dangerous and careless patients afflicted with an infectious, contagious or communicable disease. Upon complaint to a magistrate and upon proof that such patient is a menace to the community, he may be committed to a hospital for the protection of his family and the public at large.

New York's Law for Prevention of Procreation.

Several readers having asked for a transcript of the law passed by the legislature of New York for the prevention of procreation among feeble-minded, criminals and other defectives, the main features are reproduced herewith. After authorizing the appointment of a board, to include one surgeon, one neurologist and one general practitioner, the law reads:

"It shall be the duty of the said board to examine into the mental and physical condition and the record and family history of the feeble-minded, epileptic, criminal and other defective inmates confined in the several state hospitals for the insane, state prisons, reformatories and charitable and penal institutions in the state, and if in the judgment of the majority of said board procreation by any such person would produce children with an inherited tendency to crime, insanity, feeble-mindedness, idiocy or imbecility and there is no probability that the condition of any such person so examined will improve to such an extent as to render procreation by any such person advisable, or if the physical or mental condition of any such person will be substantially improved thereby, then said board shall appoint one of its members to perform such operation for the prevention of procreation as shall be decided by said board to be most effective.

"The criminals who shall come within the operation of this law shall be those who have been convicted of the crime of rape or of such succession of offenses against criminal law as in the opinion of the board shall be deemed to be sufficient evidence of confirmed criminal tendencies."

The law provides that the person to be examined is to have counsel appointed by a supreme court or county judge, and further reads that "The record taken upon the examination of every such inmate signed by the said board of examiners shall be preserved by the insituation where said inmate is confined and one year after the performance of the operation the superintendent or other administrative officer of the institution wherein such inmate is confined shall report to the board of examiners the condition of the inmate and the effect of such operation upon such inmate, and a copy of the report shall be filed with the record of the examination."

It is to be hoped that other commonwealths will pass similar laws, based upon this wise and humane act.

Notable Features on the Program of Hygiene Congress.

The Fourth International Congress on School Hygiene, at Buffalo, August 25-30th, will be by far the most elaborate effort yet made in this country toward getting the problem of school hygiene before the world. The first International Congress was held at Nurem-

berg in 1904, the second at London in 1907, the third at Paris in 1910.

The objects of the Buffalo Congress are:

(1) To bring together men and women interested in the health of school children.

(2) To organize a program of papers and discussions covering the field of school hygiene.

(3) To assemble a school exhibit representing the best that is being done in school hygiene.

(4) To secure a commercial exhibit of practical and educational value to school people.

(5) To publish the proceedings of this Congress and distribute them to each member.

In addition there is a plan on foot to effect a permanent organization for the purpose of carrying out school hygiene reforms in all the individual communities in this country, if not all over the world. The program committee announces a program of two hundred and fifty papers and fifteen symposiums, taking up hygiene from the following points of view:

I. The hygiene of school buildings, grounds material and up-keep.

II. The hygiene of school administration and schedule.

III. Medical, hygienic and sanitary supervision in schools.

Special discussions are being arranged on the following subjects:

"School Feeding," arranged by the Committee on School Feeding of the American Home Economics Society.

"Oral Hygiene," arranged by National Mouth Hygiene Association.

"Sex Hygiene," arranged by the American Federation of Sex Hygiene.

"Conservation of Vision in School Children," arranged by the Society for the Prevention of Blindness.

"Health Supervision of University Students," arranged by Dr. Mazyck P. Ravenel, University of Wisconsin.

"School Illumination," arranged by the Society of Illuminating Engineers.

"Relation Between Physical Education and School Hygiene," arranged by the American Physical Education Association.

"Tuberculosis Among School Children," arranged by the Society for the Prevention of Tuberculosis.

"Physical Education and College Hygiene," arranged by the Society of Directors of Physical Education in Colleges.

"The Binet-Simon Test," arranged by Professor Terman, Stanford University.

"The Mentally Defective Child," arranged by Dr. Henry H. Goddard, Vineland, N. J.

President Wilson has accepted the honorary office of patron of the Congress. The president of the Congress is Mr. Charles W. Eliot, of Harvard University. The vice-presidents are Dr. William H. Welch, of Johns Hopkins University, and Dr. Henry P. Walcott president of the recent International Congress on School Hygiene and Demography, and chairman of the Massachusetts State Board of Health.

One Morality Code.

So long as men may without scruple, without violation of social laws, with what one might term the tacit encouragement of society freely consort with immoral women without incurring any social stigma, so long will they continue to infect innocent women they marry with diseases which soil them, which poison them, and which kill them.

At the present moment, according to no less an authority than the American Society of Sanitary and Moral Prophylaxis, "fully one-eighth of all the disease and suffering which afflict humanity is due directly or indirectly to incontinence." Incontinence, that is, among men.

A committee of the New York County Medical Society appointed in 1901 to investigate the subject, reported as "a conservative estimate" that of the million people walking the streets of New York at least 200,000 were infected with venereal diseases. Doctor Buckley's calculation was that New Yorkers affected were increasing at the rate of 50,000 annually. In a paper published in the Ohio Sanitary Bulletin for March, 1906, Drs. Fred C. Valentine and Terry M. Townsend of New York said that though the figures given must understate the truth, yet if we accept them we must also accept that to-day there are in the United States some sixteen million people infected with venereal diseases. The same careful estimate would give these polluted ranks an increase of three and a half millions annually.

"Dr. P. J. Haigis of Foxboro, Mass., quotes expert authority for the statement that of the 14,000,000 young men in this country to-day under the age of 30, fifty per cent. have some venereal disease and that from 75 to 90 per cent of all our men have contracted some taint. Another physician of the very highest standing, Dr. Charles Edward Nammack, president of the Guild of St. Luke, New York; presents these appalling figures: "Venereal disease, he says, causes 90 per cent of all cases of locomotor ataxia, 75 per cent. of all ocular paralysis, 80 per cent. of all cases of paresis, and 42 per cent. of all abortions, besides being the cause of death in from 60 to 80 per cent. of syphilitic children who are born alive. One form of venereal disease causes 75 per cent. of all pelvic inüammation among married women, 80 per cent. of blindness in newborn infants, and 15 to 25 per cent. of all cases of blindness. —(G. F. Butler before the Illinois State Conference of Charities and Correction.

Spasmodic Torticollis.

W. F. Schaller, San Francisco (*J. A. M. A.*, May 10), analyzes the symptoms of two cases which he reports, illustrating the difference between a tic and a spasm is a reflex movement due to some irritation along the peripheral reflex arc while a tic has its origin in the higher psychic functions and is the uncontrollable and often unconscious imitation of a purposive act. The mental state of the subject of tic is somewhat defective, volition is weak and unstable, emotionalism is exaggerated, there are apt to be obsessions and often there is a motor instability with the mental one. These psychopathic symptoms are absent in spasm and it is not, like the tic, modified, interrupted or suppressed by mental attention or distraction and it persists during sleep. The convulsive movements of a spasm are brusque and correspond to the nerve distribution and they may be accompanied by pain, which is absent in tic. The latter may be benefited by exercises of control but a spasm is not. The importance of correct diagnosis is therefore obvious, as the treatment is altogether different in the two cases. Both cases reported were of torticollis and both were practically tics and not true spasm, and Schaller thinks that this symptom may be very often properly classed as a tic.

In radiographic examination for fetus in utero in the early months or in the presence of fibromyomata, it is essential to purge and clyster.

Obstetrics and Gynecology

The Present Position of Abdominal Cesarean Section in Eclampsia.

John T. Williams, of Boston, presents the results of an unprejudiced inquiry into the actual value of Cesarean section in eclampsia as shown by the reported cases in which it has been performed. The advantages of abdominal Cesarean section over manual or instrumental dilatation of the cervix, and over vaginal Cesarean section are obvious, since it is physically easier of performance, simpler in technic, rapidly accomplished, and does not involve tears of the cervix or rupture of the uterus. There is also a lesser amount of shock. On the other hand, it throws upon a patient with damaged liver and kidneys the strain of major abdominal operation. Williams is not concerned with the more conservative treatment of eclampsia in this paper, since the point at issue is the relative value of abdominal Cesarean section and other methods of rapid delivery, and not a comparison of radical and conservative procedures. He collected 85 cases reported in the literature and compared the results with those of a much larger number of manual or instrumental dilatations and of vaginal Cesarean sections. The fetal results are better—42.2 per cent. mortality, as against a general fetal mortality of 75.4 per cent. (Friedmann). The maternal mortality has been 48.2 per cent., while mortality of vaginal Cesarean has ranged from 3 per cent. to 18 per cent., and that of dilatation of the cervix from 7 per cent. to 26 per cent. These figures seem to demonstrate that abdominal Cesarean section is a dangerous procedure in eclampsia, to be reserved for those cases where an absolute pelvic indication for the operation exists as well, and possibly those cases of threatened eclampsia, at or near term, where the amount of urinary secretion is not too greatly diminished, and the risk of the added strain upon the excretory functions is overbalanced by the danger of profound shock from a vaginal delivery.—(*Boston Medical and Surgical Journal*, March 27, 1913.)

The Isolated Active Principle of the Hypophysis.

Prof. Hermann Führer of the University of Freiburg, says it has been known for a long time that extracts from the posterior lobe of the hypophysis possess, along with other pharmaceutic activities, the property of giving rise to alterations in the blood-pressure and contractions of the uterus.

The preparations now on the market under various designations represent nothing more than dilute extracts of the infundibular portion. These extracts are so prepared that 1 Cc. of liquid corresponds to 0.1 or 0.2 Gm. of infundibular substance.

Since there are to be found in the hypophysis inactive as well as active substances, and since a simple method of valuation of hypophysis extracts is unknown, there is naturally a wide range of activity to be found in such extracts, which makes itself felt to a disturbing extent when the preparations are employed in therapeutics.

Führer set about to isolate the active principle and successfully accomplished his desire after a long series of experiments.

He succeeded in decomposing the albumen free extract of the infundibular portion of the hypophysis into eight different constituents. The intensive action of hypophysis extracts on the uterus is due unconditionally to four constituents which he describes in detail. They are precipitated by phosphotungstic acid, while those left in the filtrate do not come into practicai consideration.

As the uterine action of the hypophysis does not appear bound up in any single constituent, but, as in the case of ergot, is divided among several substances, and as these do not show qualitative but only quantitative differences in the direction mentioned, it is probable that these in their action potentize reciprocally, and it is, therefore, unsuitable to apply them separately in therapeutics. Hence the sulphate which, as Führer's investigations show, always possesses a uniform composition, and can be obtained in chemically pure crystals, has been given to the medical profession under the name of hypophysin in the form of a sterile 1:1000 aqueous solution, so that 1 Cc. contains uniformly 1 mg. hypophysin. This concentration was chosen because experiments instituted with hypophysin in gynecologic clinics, have shown that 1 mg. of this preparation exerts at least the same action as 1 Cc. of an unobjectionable well-acting extract of hypophysis, 1 Cc. of which corresponds to 0.2 Gm. fresh gland substance.

As, however, hypophysin is accurately measurable and as in consequence its solutions may be prepared always with the same contents of active constituents—which is not the case with absolute certainty with extracts—one has in employing hypophysin solutions an absolute guarantee of a preparation of constant uniform composition.

The quantitative pharmacological investigation of hypophysin has thus far extended to its action on blood-pressure, respiration and the uterus. Especially characteristic of hypophysis extracts is their action on blood-pressure and respiration in rabbits after intravenous injection, which has recently been studied accurately by Führer and Pankow.

As an oxytocic hypophysin seems to be an unqualified success. It is non-toxic and when injected into the uterus it has a marked effect.—(*Deutsch. med. Woch.*, No. XI, 1913.)

When Is the High Forceps Operation Justifiable?

James A. Harrar, attending surgeon at the Lying-in Hospital of New York, gives the following as his conclusions in regard to the high forceps operation, basing them upon his own work and the work of others in the service of this hospital:

High forceps must always be considered a major operation, to be performed only by the trained obstetrical operator.

It is never to be selected before labor as the ultimate operation, in other words it is not an elective operation.

High forceps is preferable to version in the treatment of dystocia due to contracted pelvis.

Before applying forceps to the floating head, be assured that the head can be made to engage in the brim of the pelvis with suprapubic pressure properly directed.

If in a contracted pelvis the head will not thus catch or bite in the brim, and if there is distinct overlapping, it is almost certain that it cannot safely be delivered with forceps, except with the aid of pubiotomy, and finally,

Situations do arise in which it is justifiable to apply forceps to the head above the brim.

(1) *In normal pelves:* in delayed dry labor when interference becomes urgent on account of the condition of the mother or child.

(2) In deformed pelves of medium degree: when it is possible, with one or two moderate pulls, to draw the largest diameters of the head through the pelvic inlet.—(*Bulletin of the Lying-in Hospital of the City of New York*. March, 1913.)

The Radical Abdominal Operation for Cancer of the Uterus.

John G. Clark, of Philadelphia, out of his large personal experience and from a review of the literature, is lead to offer the following summary concerning the radical operation for cancer of the uterus, according to the method of Wertheim, worked out by him on the basis of suggestions offered by Clark, Riess and Rumpf:

1. The operation, in expert hands, notwithstanding its high primary mortality, has given the greatest percentage of permanent cures of any therapeutic procedure thus far suggested for cancer of the cervix.

2. While the above conclusion is true, the general adoption of the operation, in view of its dangers and difficulties, is not to be advised until the primary mortality can be reduced to a much lower percentage by a simplification or perfection of details.

3. The abandonment of the extensive glandular dissection is justified, because this detail adds to the hazards and does not sufficiently raise the percentage of permanent cures.

4. The cardinal advantage of the operation lies, first and above all, in the excision of an extensive cuff of vagina and the widest possible removal of the parametrial tissue.

5. There is no middle-of-the-road policy in cancer of the cervix. The surgeon would better perform a simple vaginal hysterectomy or a high amputation of the cervix with extensive cauterization than to attempt the radical operation if he is not prepared effectively to execute its details.

6. The earnest endeavor by many specialists, with the improved ultimate cures in a few hands, offers the hope that a further simplification and perfection of details in this operation may yet make it more generally available.—(*Surgery, Gynecology and Obstetrics,* March, 1913.)

How We May Reduce the Mortality from Cancer of the Uterus.

H. J. Boldt, of New York, emphasizes the fact that we know nothing definite as to the cause of cancer and reminds us that there are no symptoms which, alone, are characteristic of cancer of the uterus. The onset of the disease is so insidious that sometimes the neoplasm has progressed to a stage beyond the hope of cure by any kind of operation, before the appearance of a symptom sufficiently marked to cause the patient to seek advice. The promulgation of knowledge regarding cancer of the uterus through the lay press, as advised at the last meeting of a large national gathering, cannot bring about a lowering of mortality from uterine cancer to such extent as would be the case if the medical profession—the family physician—did the teaching directly. Information regarding cancer of the uterus in its early stages, through the lay press, is likely to do more harm than good, because there as no characteristic symptoms that apply to that disease alone, and because the principal early symptom, leukorrhea, is one that is present so often in women in whom there is not the slightest suspicion of uterine cancer that such lay articles are likely to aggravate the nervous symptoms already existing in many, and make neurasthenics of some who are not ill. The family physician must be urged to realize that, in all instances in which there is the slightest suspicion of cancer, his obligation to his patient is to ascertain, by all diagnostic means at his command, that cancer is *not* present, rather than to affirm a cancer diagnosis. When the diagnosis of cancer has been made, an operation for the relief, or the cure —as the case may be—should be undertaken as soon as possible, since, with our present knowledge, surgery offers the best prospect for the patient.—(*J. A. M. A.,* March 29, 1913.)

Gynecological Hints.

Ralph Waldo, of New York, gives some general hints that are well worth assimilation: 1. Unless a careful examination is made a urethritis is frequently mistaken for cystitis. 2. One of the most important uses of rubber gloves in gynecological practice is to keep the doctor's hands in good condition. 3. Granulations or small mucous polypi often form in the lower portion of the urethra and cause frequent and painful urination. They can easily be removed after the free application of a 2 per cent. cocain solution. As they are usually associated with urethritis this must be cured by appropriate treatment, as otherwise the growths will return. Not infrequently Skene's glands are infected and to remove the infection it is usually necessary to incise the small ducts (two in number) leading to them. 4. Intrauterine medication is a surgical procedure and should rarely if ever be performed in the doctor's office. The practice of applying equal parts of tincture of iodin and carbolic acid with an applicator to the interior of the uterus through a cervical canal that has not been thoroughly dilated has many times resulted in severe burns in the upper part of the vagina. 5. In the treatment of infection following abortion or delivery at term, when putrid material remains in the uterine cavity, this should first be thoroughly removed with the finger, blunt curette or forceps. Then an intrauterine douche of a weak antiseptic solution should be given, to be followed by another of sterile saline solution. Tincture of iodin, one ounce to two quarts of sterile water, is one of the best antiseptics to use in the uterus. Repeated intrauterine douches or medication of any kind is injurious to patients suffering from puerperal sepsis.—(*International Journal of Surgery,* February, 1913.)

Diagnosis

The Diagnostician.

Anthony Bassler, of New York, looks forward to a new kind of American specialist, and pleads for his establishment now, and the elevation thereby of diagnosis. All about us as individuals are the signs of Americanism in the various walks of life, and still medicine is making a flashy progress here and there, but the rank and file of the men are standing still. Excepting the successes of a few men at the top of the various specialties, there is much complaint. Absolutely apart from deficiencies that this or that man has, conditions have changed between the laity and ourselves, one specialist and another, even between one general practitioner and another, and many seem to be complaining but none reaching out to arrange for the new adjustment of all that is inevitable. Almost everyone seems to be standing still, either criticising some one or thing, or complaining about himself. Bassler thinks that too little attenton is given to diagnosis. Instead we give ourselves to bickerings and fix our attention upon certain evils, for many of which we are ourselves responsible. We complain about unjust optometry bills, fee splitting, hospital and dispensary charity abuse, the acceptance of small fees by some of the best men, subtle and flagrant forms of advertising in and out of the profession on the part of some for their own benefit, rather than for that of the art of medicine. With our energies in this disorganized state it is to be expected that many unfor-

tunate gaps should exist that ought to be filled or bridged over. It is not remarkable that there should be self-seekers building up warped organizations; too many hospitals and clinics with inferior men in them in high postions; so little co-operaton between these men; too much laymen influence of a business kind in the administration of our hospitals; too many rival medical schools and too many laboratories; too much enthusiasm on the part of some and not enough on that of others; too many unfair laws and not enough good ones; no health bureau at Washington; too many cults, -isms and -pathies; too much interference upon the rights of the practice of medicine by some local and State boards of health; not enough commingling of the specialties so as to straighten out each on substantial lines for the future; too many rivalries and not enough pure brotherly love between us, something which always makes for our own and the patient's benefit. These gaps should be filled. This can be done by bringings all of the various kinds of men to a focus or by improving the knowledge of each of them so that there will be a broader scope—both of which under the conditions that exist in medicine to-day are seemingly impractical. One of two things is necessary, either that a combination of men interested in the various sides of medicine club together primarily to arrive at diagnoses so that any one of them can cover any scope in the therapy demanded in a case, or that we develop a new department, that, namely, of the diagnostician and consider the specialists as skilled workers in therapy. For this type of man—the diagnostician—on whom the future will inevitably shower places, there is now beginning a crying demand. Bassler suggests that well-qualified men should begin in the early days of their practice to take up the specialty of diagnosis, so that when the time comes, as it inevitably will, such men will exist.—(*New York Medical Journal,* March 13, 1913.)

Differential Diagnosis of Abdominal Pain.

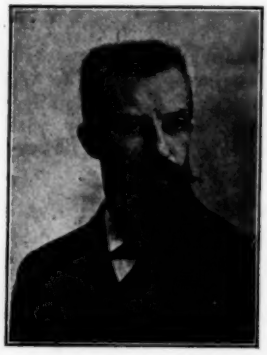
Various diseases give rise to abdominal pain in children, and many of these falsely simulate appendicitis, says Finkelstein: (1) Those conditions of pain not abdominal but due to hyperalgesia of the skin reflected from the abdominal organs. (2) Neuralgia of the lumbar nerves due to spinal caries. (3) Fermentative dyspepsia. Moderate pain, but frequently repeated; sensitive to pressure along the colon. Movements follow two or three times a day, are lighter and softer than normal, markedly acid, with a tendency to gaseous formation. Proper diet relieves the condition. (4) Constipation. (5) Neuropathic children frequently suffer from abdominal pains for no apparent cause. These pains come on suddenly and pass off quickly; vomiting is rare. The recti stand out and neuropathic stigmata are common. Suggestive treatment, massage, faradization, etc., usually results in a cure. (6) Small herniæ of the linea alba. It is rarely necessary to treat the hernia. (7) Stenosis of the bowel. In some cases only slight meteorism may be present, vomiting may be absent, and the general condition good; only the attacks of pain point to a serious disease. These cases are all cured after long treatment. The author considers the disease is often due to a passing disturbance, a result of peritoneal adhesions from circumscribed peritoneal tuberculosis. (8) Renal colic. This may give rise to abdominal pain, and repeated examination of the urine will be required sometimes for the purposes of diagnosis.—(*Centralblatt f. Kinderheil, No. XVII.,* 1912.)

The Physician's Library

Insurance Medicine. By Henry M. Schroeder, M.D., Medical Director of the Mutual Life Insurance Co., New York. Cloth, 150 pages. Price, $2.00 net. New York: William Wood & Co., 1913.

Those who have followed the excellent suggestions to medical examiners which have appeared in the *Medical Record* from time to time will be glad to know that they have been classified and put into book form. Primarily the book will appeal to that large class of practitioners who examine applicants for life insurance and the appeal will be the stronger, for Dr. Schroeder, one of the leading authorities among American medical examiners, has divested the subject of didactic verbiage and has brought to the surface the helpful, practical points which an examining physician should know. Secondarily the book is of value as a text-book on physical examination. Every sentence is full of meat and the book fairly bristles with relevant facts. By it the tortuous paths of physical examination are made straight.

Gynecological Operations. By Dr. Henri Hartmann, Professor of the Faculty of Medicine, Paris, etc. Translated by D. W. Sibbald, M. B., Ch. B., Edin. Cloth, 536 pages, illustrated. Price $7.00 net. Philadelphia: P. Blakiston's Son & Co., 1913.



PROF. HENRI HARTMANN.

In the comparatively limited confines of this book the author has covered his great subject in a thorough manner. This is due to the elimination of much unnecessary controversial material. Hartmann goes at his subject without fuss or feathers, although he gives due attention to the ideas of other surgeons. He has decided opinions. In some cases they are radical, but Hartmann's ability is recognized the world over and his methods will be studied with respectful attention.

The entire gynecological field is comprehensively, and while operative procedure predominates, non-operative treatment is carefully and favorably considered. One of the most hopeful signs of the times, as reflected in this book, is the endeavor of the author to consider the effect of operations on future pregnancies and to safeguard in every way the woman's ability to bear children.

Cardio-Vascular Diseases. By Thomas E. Satterthwaite, M. D., LL. D., consulting physician to the New York Postgraduate, Manhattan State and other hospitals. Cloth, 166 pages. New York: Lemcke & Buechner, 32 W. 27th St. 1913.

This is a thoughtful study of the recent advances in the anatomy, physiology, pathology, diagnosis and treatment of cardiac diseases by a leading authority upon the subject and is in reality a compilation of facts based upon the numerous monographs published by the author during the past few years. Some material from Dr. Satterthwaite's pen has recently appeared in the columns of this journal. The book will appeal to the

(*Continued on p.* 20.)

Intestinal Antisepsis

has for many years been accepted with growing appreciation as the rational treatment in gastro-intestinal diseases that are the result of fermentation or putrefaction.

The class of remedies possessing the power to arrest the septic process, correct atonic relaxation and allay the inflammation is well represented in

BISMACOL

Each fluid ounce of which represents:

Bismuth Oxide Hydrated	12 grains
Magnesium Salicylate	1 grain
Geranium Maculatum	32 grains
Pancreatin	4 "
Potassium Guaiacol Sulphonate	4 "
Sodium Sulphophenate	1 grain
Chloroform	2 minims
Elm in Mucilage	10 grains

Bismacol is given with every reasonable assurance of success in diarrhea and dysentery, especially in the fermentative and choleric diseases incident to the summer season.

The finely divided Bismuth Magma supplies a uniform coating over the mucous membranes of the entire gastro-intestinal tract.

Bismacol is sedative, antiseptic and astringent without harshness or undue styptic effect that might interfere with the restoration of normal gastric function.

To any physician who has never prescribed Bismacol, or is unable to secure it from the local druggist or supply house, we will send a full size bottle on receipt of 50 cents to cover the delivery and packing expense. The regular price is 80 cents per bottle.

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CINCINNATI

reader as a clear exposition of the use of many of the new diagnostic instruments. Sphygmomanometry, electrocardiography, phonocardiography, viscicometry and the like have been aptly dealt with, to the readers' great edification, and the scholarly description of functional and organic lesions is of decided value. The book readily impresses the physician as a decidedly valuable aid to diagnosis and treatment.

Golden Rules of Surgery. By the late A. C. Bernays, M. D., of St. Louis. Revised by W. T. Coughlin, M. D. Cloth, 281 pages. Price, $2.25. . St Louis: C. V. Mosby Co., 1913.

To the believer in the value of short, terse sentences on great subjects this book will appeal. It is an imperative study and is full of admonitions like "Don't," "Be Sure," "Remember" and the like. We do not see the real worth of maxims in a major branch like surgery, but if one can be impressed by short sentenced commands having to do with the cardinal principles of surgery, this little handbook fills the need. The material shows great care in preparation.

Handbook of Diseases of the Rectum. By Louis J. Hirschman, M. D., Professor of Proctology in Detroit College of Medicine. 2d edition. Cloth, 340 pages and 172 illustrations. Price $4.00 net. St. Louis: C. V. Mosby Co., 1913.

That the general practitioner may become familiar with rectal surgery is the *raison d'etre* of this book. Proctology is little understood and much abused by the majority of non-specialists and this book ought, if intelligently read, to assist in doing away with such conditions.

The details of rectal work are thoroughly worked out and every possible condition and case is illustrated by means of good cuts. Local anesthesia plays an important part in the book, as the author is a firm believer in this method.

As a whole the volume is worthy of careful consideration on the part of the family physician, who, by carrying out the author's thought, might add some splendid special work to his daily general routine.

Manual of Immunity. By Elizabeth T. Fraser, M. D,. of Glasgow. Cloth, 200 pages. Price $1.60 net. The Macmillan Company, New York, 1913.

This little manual is of assistance in aiding the reader to fix in mind the important facts regarding that much misunderstood word, Immunity. It discusses the body fluids, the body cell and the micro-organism as factors in immunity and the immunity reactions employed for therapeutic ends and for diagnostic purposes. Some space is devoted to anaphylaxis, chemo-therapy, salvarsan and its twin, neosalvarsan, and Ehrlich's theory. For the purpose intended the book is excellent. It condenses much information in short space and the method of expression is lucid.

Clinique médicale de l'Hotel-Dieu de Paris. Par le professeur A. Gilbert. 1 vol. in-8 de 312 pages, avec figures noires et coloriées: 12 francs. Paris: J.-B.Baillière et fils, 19, rue Hautefeuille, 1913.

This is a brilliantly written description of the work of Gilbert by an admiring student Dieulafoy. It shows that the learned French diagnostician, in the course of this work, has utilized every method known to medical science to accomplish the desired end. Gilbert is characterized as a "most remarkable workman" who is writing into the history of l'Hotel-Dieu the exemplification of best known principles of therapeutics.

Mind and Health. By Edward E. Weaver, Ph. D., of Clark University. Cloth, 500 pages. Price, $2.00 net. New York: The Macmillan Company, 1913.

The real import of the book is succinctly told in the foreword. This treatise is an attempt to embody some of the latest results of the psychological study of the influence of mental states upon health and to lay down the fundamental psychological principles governing health and promoting healing.

Inasmuch as there is a strong tendency on the part of religious bodies to make non-medical healing a part of their work, and because this is done without a thorough knowledge of psychology or medicine, there is urgent need for the examination of this professed healing. After a thorough psychological discussion of the subject of the influence of the mind upon health, including its larger aspects which relate to man as a purposive being, religious ground is entered upon. A painstaking examination is made of various systems of healing of a religious character from the standpoint of present-day scientific mental healing.

In the light of this discussion there arises the necessity of construction to show the relations of the scientific and religious in a true system of religious healing and to point the way by which, in the best light of scientific thought of to-day, the church may heal.

Malaria. By W. B. Herms, M. A., Assistant Professor of Applied Parasitology in the University of California. Cloth, 163 pages, illustrated. Price, $1.50 net. New York: The Macmillan Company, 1913.

This is a well written book, intended for the laity, for the purpose of enlisting sympathetic and intelligent assistance in the crusade against the anopheles mosquito. It is a valuable contribution to the subject, especially as it deals with the history of the disease and with the various methods of eliminating the causative factor. It should prove of great aid to boards of health, women's clubs and other organizations enlisted in the warfare on the mosquito.

Progressive Medicine. A Quarterly Digest. Edited by Hobart A. Hare, M. D., of Philadelphia. Vol. XV, No. I, paper, 360 pages, illustrated. Price, $6 per annum. Philadelphia: Lea & Febiger, 1913.

This number contains these articles: Surgery of the Head, Neck and Thorax, by Charles H. Frazier, M. D.; Infectious Diseases, including Acute Rheumatism, Croupous Pneumonia and Influenza, by John Ruhräh, M. D.; Diseases of Children, by Floyd M. Crandall, M. D.; Rhinology and Laryngology, by George B. Wood, M. D.; Otology, by Arthur B. Duel, M. D.

These exhaustive reviews cover the latest thoughts in the subjects discussed. In no way can a physician keep himself better informed as to the different phases of medicine than by means of this series.

Books Received.

All books received will be acknowledged in this column, and those which warrant further notice will be given a more extended review in a later issue.

Manual of Medicine for Nurses. By George H. Hoxie, M.D., Physician to the German Hospital, Kansas City, Mo., and Pearl L. Laptad, formerly Principal of the Training School for Nurses of the University of Kansas. Second edition, rewritten and enlarged. 12mo of 351 pages, illustrated. Cloth, $1.50 net. Published in 1913 by W. B. Saunders Company, Philadelphia and London.

(*Continued on p. 22.*)

THERAPEUTIC MEMORANDA.

For Infiltration and Conductive Anesthesia.—Biberfeld found Novocain produces weaker toxic effects than any hitherto known anesthetic. It is nonirritating and has no peripheral effect on vessels. (Shields, *Lancet Clinic,* March 30, 1913.) As to the quantity that may be injected at any one time, this remains still indefinite, as there has never been a case of poisoning reported. Braun has used 250 Cc. of a ½% solution, besides small amounts of a 1% solution at one time. This represents 1¼ grams (practically 19 grains) of Novocain. Personally I have never found it necessary to use more than 150 to 175 Cc. and have never seen a case of toxemia.

Operative Surgery of Goitre.—Although I think the majority of surgeons are using ether, it seems to me the best results are obtained under preliminary scopolamin and morphia with Novocain and adrenalin locally at the time of operation. (J. P. Marsh, *N. Y. State Jour. Med.,* April 1913.) Regarding the use of straight cocain in these cases, I would not have the courage to employ it. When Novocain is seven times less toxic and ten times more anesthetic than simple cocain, the use of the latter is almost inexcusable.

Intravenous Anesthesia.—Hayward (*Arch. f. Klin. Chir.* Bd. 94, Hft. 4 by *Int. Jour. Surg.,* March, 1913) presents observations based upon 375 cases of intravenous anesthesia in Bier's Clinic. It has replaced general narcosis almost completely in operations upon the extremities owing to its reliability and freedom from risk. Novocain in ½% solution is used in amounts of 30 to 100 Cc., according to age and sex. Complete anesthesia was obtained in 93% of the cases.

Operations on Hands and Feet.—Kaerger reports (*Arch. f. Klin. Chir.,* 1912 XCIX, 983 by *Surg. Gyn. and Obst.,* March, 1913) 150 operations on hands and feet in Bier's clinic under direct Novocain anesthesia of the smaller veins. Sixteen were for ingrowing nails, amputation of toes, etc., and 134 were on the hands for removal of foreign bodies, metacarpal tumors, amputations, whitlow and phlegmon.

The Treatment of Polyarthritis.—When the physician is compelled to change therapeutic agents in treating polyarthritis and neuralgic conditions, Schultze, of St. Joseph's Hospital for the Gray Sisters, Berlin, advises the use of the new antirheumatic, Melubrin (*Med. Klinik,* No. 11, 1913).

In his opinion, it is a valuable antirheumatic, is well borne, has no by-effects and undoubtedly possesses a specific action in the above-mentioned diseases.

Generally speaking, Schultze prefers Melubrin in the lighter cases, although in one severe case of polyarthritis it proved extremely valuable. In a case of sciatica of several years' standing a remarkable improvement took place after the administration of Melubrin. In the severe and especially painful affections of this kind, probably Pyramidon and its compounds are more efficacious, but if a change is necessary, Melubrin should be tried. The majority of the patients who have once taken Melubrin wish to continue, as, of all the remedies, it caused the least by-effects, besides having a good effect. These products may be obtained through the Farbwerke-Hoechst Company of New York, American agents for Salvarsan, Neosalvarsan, Antipyrin and others.

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The Modern Treatment of Nervous and Mental Diseases. By American and British authors. Edited by William A. White, M.D., Superintendent of the Government Hospital for the Insane, Washington, D. C.; Professor of Nervous and Mental Diseases in the Georgetown University and in the George Washington University, etc.; and Smith Ely Jelliffe, A.M., M.D., Ph.D., Adjunct Professor of Diseases of the Mind and Nervous System in the N. Y. Post-Graduate Medical School and Hospital; Visiting Neurologist to the New York City Hospital, etc. Two octavo volumes, containing about 900 pages each, illustrated. Per volume, cloth, $6.00 net. Published in 1913 by Lea & Febiger, Philadelphia and New York.

Annual Reports of Bureaus of Factory Inspection, Mercantile Inspection, Labor Statistics, Mediation and Arbitration. Cloth, in two volumes of 1240 pages. Published in 1913 by the New York State Department of Labor, Albany.

Food and Flavor. By Henry T. Finck. Cloth. Illustrated. 594 pages. Published in 1913 by the Century Company, New York.

Disease in Milk—The Remedy, Pasteurization. Compiled by Lina Gutherz Straus (Mrs. Nathan Straus). Paper. Illustrated. 221 pages. Published in 1913 by Mrs. Straus, 27 W. 72d St., New York.

Les Epauchements du Pericarde. La Ponction épigastrique de Marfan. Par Le Docteur Germain Blechmann. Paper, 349 pages. Published in 1913 by J. B. Baillière et Fils, 19 Rue Hautefeuille, Paris.

The Saunders Catalogue.

W. B. Saunders Company, publishers, of Philadelphia and London, have issued the 17th edition of their handsome illustrated catalogue. It describes nine new books and ten new editions, not mentioned in the previous issue. These new books are of great interest to the medical man. Any physician can get a copy of the catalogue by dropping a line to the publishers. It is most valuable as a reference work of modern medical literature.

O'Gorman, Battle & Vandiver.

Almuth C. Vandiver, Esq., one of the editors of THE MEDICAL TIMES, and counsel to the Medical Society of the County of New York, has taken the place recently vacated by U. S. District Attorney H. Snowden Marshall in the great law firm headed by United States Senator James A. O'Gorman. The reorganized firm will be known as O'Gorman, Battle and Vandiver. Senator O'Gorman, before his election to the Senate, was for years one of the ablest and most independent justices on the Supreme Bench of the State of New York. Mr. Battle is recognized as a leader of the New York bar and Mr. Vandiver is rapidly assuming such a position. Although he has been practising law a scant ten years Mr. Vandiver has served the county of New York efficiently as Assistant District Attorney under William T. Jerome. He left that position to form a partnership with Judge Charles S. Whitman, the present District Attorney, who is rapidly putting the fear of God and the law in the hearts of New York's underworld and certain members of the police force.

Mr. Vandiver's work in the interest of the County Medical Society has been brilliant. Readers of THE MEDICAL TIMES who have profited by reading the articles from his pen in these columns will congratulate Mr. Vandiver upon the marked recognition of his talents by such eminently qualified judges.

Historical Medical Museum.

The Historical Medical Museum, which is to be opened in London towards the end of June next, will include some objects of exceptional historical medical interest.

An important exhibit in the science section will be a large collection of the original apparatus used by the famous Galvani in making his first experiments in Galvanism in the 18th century.

A remarkable collection of votive offerings for health will be exhibited. The custom of presenting these offerings in cases of sickness is a very ancient one, and the collection that will be shown is probably the finest ever brought together. It will include Graeco-Roman votive offerings of special anatomical and pathological interest in silver, bronze, marble and terra cotta, together with a number of similar objects used for the same purpose in medieval and modern times.

Ancient microscopes and optical instruments, gathered from all quarters of Europe, will form another important feature, and a selection of surgical instruments used by famous surgeons when operating on historical personages is promised.

The collection of amulets and charms connected with English folk medicine will be very complete, and will constitute an exhibit of more than ordinary interest.

A fine collection of early medical medals and coins from the Graeco-Roman period, ancient manuscripts and early printed medical books will also be shown, together with many other objects of interests to medical and scientific men.

The Doctors' Riot.

On April 13th, 1788, one hundred and twenty-five years ago, there occurred in New York City, the "Doctors' Riot."

The effect of this episode has been felt by the whole medical profession. It was the means not only of immediately bringing about the rightful use of the New York Hospital, at that time used as a meeting place for the State Legislature and other public purposes, but also of placing upon the statutes of the state proper laws for anatomical dissection.

It was the beginning of the era of scientific medicine in America.

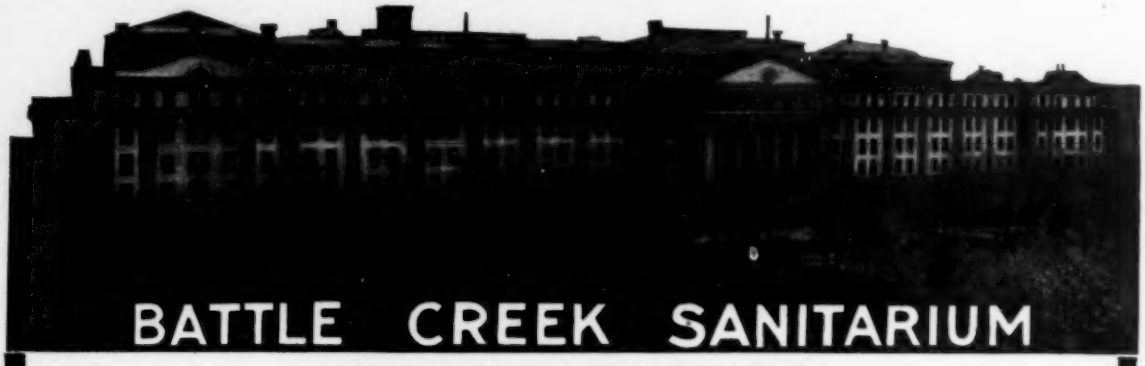
Reed & Carnrick of Jersey City, the leading physiological manufacturing chemists of the country, have very cleverly reproduced accounts of the riot from the columns of the New York *Packet* of April 18 and 25, 1788, giving in quaint language the details of the riot. The fray assumed such alarming proportions that the militia was called out and several people were killed. The booklet is of historic interest and contains many clinical references of real interest to the medical profession.

American Association for Promoting Hygiene and Public Baths.

This association met in Baltimore on May 13-15. Papers were read and discussion were participated in by members and delegates from many cities in various parts of the country. Dr. Simon Baruch, the president, delivered an address at McCoy Hall, Johns Hopkins University. Other speakers there were William H. Welch of Johns Hopkins and Dr. J. S. Fulton, secretary of the Maryland State Board of Health.

The officers of the association elected for 1914 are: Dr. Simon Baruch, New York, president, re-elected; Rev. Thomas M. Beadenkopf, Baltimore, vice-president; J. Leonard Mason, Newark, N. J., secretary.

The place of meeting for next year is Newark, N. J.



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MONDAYS.

City Hospital—
Dermatology .....Dr. Fordyce .... 3:00 P.M.
Neurological Hospital—
Neurology .....Dr. McPhee .... 2:00 P.M.
Cumberland Street Hospital (Brooklyn)
Surgery .....Dr. Pallister .... 2:30 P.M.
Laryngology and Rhinology..Dr. Stewart .... 4:00 P.M.
Oral Surgery .....Dr. Shea ..... 4:30 P.M.
Kings County Hospital (Brooklyn)—
Gynecology.....Dr. McNaughton 9:00 A.M.

TUESDAYS.

Neurological Hospital—
Neurology .....Dr. Byrne ..... 9:00 A.M.
N. Y. Children's Hospitals and Schools (R. Island)—
Orthopedics .....Dr. Ogilvy .....10:00 A.M.
Cumberland Street Hospital (Brooklyn)—
Gynecology.....Dr. Burnham ... 1:00 P.M.
Surgery .....Dr. Ritch ..... 2:30 P.M.
Kings County Hospital (Brooklyn)—
Obstetrics .....Dr. Commiskey.10:00 A.M.
Surgery .....Dr. Barber.....11:00 A.M.
Genitourinary Surgery .....Dr. Morton ..... 2:00 P.M.
Genitourinary Surgery .....Dr. Fraser ..... 2:00 P.M.
Coney Island Hospital—
Surgery .....Drs. Fisk and Bogart .....10:30 A.M.
Surgery .....Drs. Murphy and Lack .....10:30 A.M.
Medicine .....Drs. Hall and Nash ..... 3:30 P.M.
Drs. Hegeman and Byington ..... 3:30 P.M.

WEDNESDAYS.

City Hospital—
Genitourinary Surgery .....Dr. Fuller ..... 2:00 P.M.
Obstetrics .....Dr. Shears ..... 2:00 P.M.
Neurological Hospital—
Neurology .....Dr. Maloney ....10:00 A.M.
Cumberland Street Hospital (Brooklyn)—
Ophthalmology and Otology..Dr. Schenck .....4:00 P.M.
Kings County Hospital (Brooklyn)—
Dermatology .....Dr. Winfield .... 1:00 P.M.
Orthopedics .....Dr. Truslow .... 9:00 A.M.
Orthopedics .....Dr. Napier ..... 2:00 P.M.
Coney Island Hospital—
Pediatrics .....Drs. Beck and McQuillan .... 3:30 P.M.
Drs. Pendleton and Van Wart. 3:30 P.M.

THURSDAYS.

City Hospital—
Gynecology .....Dr. Stearns ..... 2:00 P.M.
Cumberland Street Hospital (Brooklyn)—
Gynecology .....Dr. Burnham ... 1:00 P.M.
Surgery .....Dr. Ritch ..... 2:30 P.M.
Laryngology and Rhinology..Dr. Stewart .... 4:00 P.M.
Kings County Hospital (Brooklyn)—
Obstetrics .....Drs. Commiskey and Judd .....10:00 A.M.
Otology .....Dr. Alderton ... 1:00 P.M.
Surgery .....Dr. Barber ..... 2:00 P.M.
Coney Island Hospital—
Gynecology .....Drs. McEvitt and Mills .....10:30 A.M.
Drs. Mayne and Rankin .....10:30 A.M.
Surgery .....Drs. Fiske and Bogart ..... 3:00 P.M.
Drs. Murphy and Lack ..... 3:00 P.M.

FRIDAYS.

City Hospital—
Ophthalmology.....Dr. Wiesner .... 9:00 A.M.
Laryngology and Rhinology..Dr. Dougherty.. 2:30 P.M.
Neurological Hospital—
Neurology .....Dr. Abrahamson. 9:00 A.M.
Cumberland Street Hospital (Brooklyn)—
Surgery .....Dr. Pallister..... 2:30 P.M.
Surgery, Oral .....Dr. Shea..... 4:30 P.M.
Kings County Hospital (Brooklyn)—
Gynecology .....Dr. McNaughton 9:00 A.M.

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